Decentralised power generation
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Heating, cooling and electricity – decentralised and on demand

Based on years of experience and innovation, we design, engineer and erect plants for regional, municipal, commercial and industrial energy supply – both as general contractor or as part of individual orders. Our focal points are: Plants for power, hot water, steam and refrigeration supply as well as combinations thereof. Cremation technology is another of our specialities.

We always work independently of the manufacturer. This ensures that our customers can be certain of receiving custom solutions that meet their demands.

Our project responsibility far exceeds the engineering and erection of plants and also includes a reliable customer service with 24-hour on-call service, as well as continuous plant optimisation.
Our solutions

Experts for energy technology and environmental protection – in-house quality

Your advantage: integrated engineering and erection of plants of any size – across disciplines and without being tied to a manufacturer. More than 120 of our own employees stand ready to ensure the high-quality execution of any project. Most of them have been with the company for many years and are experts in their fields. The result: an efficient use of products and technology, sustainable, energy-preserving and environment-preserving solutions and a convincing cost/benefit ratio.

The Kraftanlagen Group is a versatile partner for industry and the energy sector. We are covering the entire life cycle of plant technology. Our range of services in the area of decentralised power generation includes the following solutions:

- Concept development with system comparisons
- Manufacturer-independent consultation
- Process engineering
- Execution and construction engineering
- Non-manufacturer-specific selection of components
- Coordination of functions
- Project erection
- Commissioning
- Professional instructions and training of the operating personnel
- Documentation
- Inspection and maintenance schedules
- Regular operational readiness tests and inspections
- Maintenance and upkeep
- Repairs
- Plant optimisation
- Inspection and repair work
- Research & Development
- Concept, Project Planning & Engineering
- Procurement, Supply & Fabrication
- Construction & Installation
- Commissioning
- Maintenance & Service
- Decommissioning & Dismantling

The key to our future is the efficiency with which we design, build and operate plants that generate energy. Put these tasks in the hands of partners that understand engineering as well as they do all other disciplines.
Combined heat and power generation

Our contribution to the energy transition: state-of-the-art custom plants

Our combined heat and power generation plants (CHP) convince with their high fuel efficiency. With these plants, we implement municipal or private sector decentralised energy supply concepts in a manner that is inexpensive and environmentally friendly because we meet any demand with regard to size, output, fuel and grid characteristics – without expensive service backlogs. Requirement: thorough needs assessment, professional engineering and a high quality of execution.

Combined heat and power generation:
- Combustion engines
- Gas turbines
- Steam turbines
- Steam engines

Integrated plant concepts
The Kraftanlagen Group builds combined heat and power generation plants with combustion engines, gas turbines, steam turbines and steam engines. The focal point is an integrated approach. We will build the system that most comprehensively meets your needs. Special requirements call for special solutions. One of our strengths is the ability to satisfy all requirements while managing to build plants that still have an appropriate cost/performance ratio.

Remotorisation
Everything is in flux – CHP technology keeps advancing and is getting more efficient. At the same time, existing CHP plants are subject to operational wear and tear. Therefore it might pay off to check whether the remotorisation of existing plants is worth it.

CHPP for the VW plant in Zwickau
General contractor in charge of engineering, erection, commissioning and documentation of the power plant with an electrical power performance of about 13 MW. Three units with outputs of 4.3 MWel and 4.7 MWh are being used in the CHPP.

Concrete container station Norderstedt, Kielortring. General contractor in charge of engineering, implementation, commissioning and documentation of the combined heat and power plant with outputs of 2 MWel, 2 MWh. Due to its proximity to a residential area, there were high sound proofing requirements.
In light of finite energy reserves and the consequences of emissions, energy has to be utilised as efficiently as possible. Those using advanced technologies can significantly reduce the use of fuel and therefore its energy costs and the effect on the environment. The Kraftanlagen Group assumes this responsibility. Careful dimensioning and the effective interplay of plant components guarantee that we create hot water and steam generation plants that are efficient, reliable, highly available and durable.

**Hot water and steam generation:**
- Shell boilers
- Water pipe boilers
- Natural gas and heating oil firing
- Heavy oven firing
- Solids and dust firing

**Free choice of energy sources**
Which energy source is best for your project? Which system from which manufacturer sustainably meets your needs? We are erecting the suitable plants with shell and water pipe boilers, fired with natural gas, light and heavy heating oils, solid, dust and special fuels.

**Conversion and expansion during ongoing operation**
Existing plants can often be inexpensively converted to meet the latest energy efficiency standards. We will gladly provide you with comprehensive advice and convert or expand your plant – even during ongoing operation.

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**Peak load and reserve load plant Gropiusstadt, Berlin**
The natural gas-fuelled boiler plant is the backbone of the district heating supply for the 50,000 residents of the Gropiusstadt district. With an output of 32 MWth each, the boilers are available to cover peak loads or as a stand-by reserve.
Refrigeration technology

Know-how for safe processes

In many areas, the use of refrigeration units is indispensable – whether for cooling production processes, for storing sensitive or perishable products or to provide convenience. In each case, not just energy efficiency must be taken into account during design, engineering and implementation of highly available refrigeration units but also safety and environmental regulations. With its wide-ranging expertise, the Kraftanlagen Group can meet complex requirements. This allows us to utilise our experience from other areas of the field of energy supply – for example in connection with combined heat and power generation plants.

Cooling and refrigeration units:
- Turbo compressor
- Screw compressor
- Reciprocating compressor
- Absorption chillers
- Free cooling

The perfect climate – turn-key ready
We are creating the right climate for your processes. Because we are finding comprehensive solutions to the tasks at hand – from the needs assessment and engineering to the turn-key ready handover of the refrigeration unit. We refurbish, modernise and expand existing plants and also maintain them – either by assuming full or partial responsibility.

Highly available refrigeration
We complete service tasks throughout Germany – an important criteria for our customers, because malfunctions in an industrial or commercial refrigeration unit can have expensive consequences. That’s why it is good to know that our experts will be on site quickly to perform maintenance tasks or to fix problems – around the clock.

Refrigeration centre for the VW plant in Emden

The plant generates cooling water for car manufacturing processes. Redundancy and high efficiency are main principles of its conception. Over a long period of time each year, the temperature control of the cooling water is handled by free cooling, i.e. without the use of coolers. This preserves resources and the environment. The cooling capacity of 5.4 MWth is generated by four coolers with screw compressors, the free cooling has a total capacity of 34.4 MWth.
New construction: crematorium in Hanover-Lahe

The plant with five furnace lines uses a large share of the heat generated by the cremation process. Heat extraction and heat utilisation contribute to lowering the primary energy consumption for these functions and thereby preserve the environment. We carried out the three construction phases as technical general contractor and, in addition to the supply and installation of the plant technology, we were also responsible for the execution of the heat extraction and the technical building services.

Incineration plants

Compliant with the latest standards

Crematoriums are complex plants that must comply with stringent regulations: Efficiency, operational safety, resistance against frequent operational changes and, of course, compliance with statutory emission standards. We know the regulations, and design and erect state-of-the-art cremation plants – complete with approval and implementation engineering all the way to the handover of an operational plant. Upon request, we will also take care of all downstream inspection and maintenance tasks.

Incineration plants:

- Flat bed furnaces
- Multi-deck furnaces
- Entrained flow process
- Fixed bed adsorption
- Heat extraction

Careful yet effective modernisation

A new construction is not always an option, e.g. in case of plants in neighbourhoods with listed buildings. We renovate, modernise and expand existing crematoriums, equip them with flue gas cleaning and emissions measuring systems and install automation and control solutions. Here, too, our cross-discipline expertise is paying off: Because we take into account the construction-related matters regarding listed buildings and incorporate other facilities and the plant’s environment into our concepts. Many qualified references make us one of Europe’s leading builders of incineration plants.
Modern industrial plants are complex, technologically demanding entities. They have to be maintained on a regular basis and from time to time there can also be failures and malfunctions. It is worth it to entrust us with maintenance tasks as well as services required by unplanned events. Because we know our plants and because we provide the structure needed to efficiently solve aftercare tasks – from inexpensive remote diagnostics options all the way to quick and efficient on-site services.

Our maintenance service – a real added value for you
Another advantage: Our professional inspection services can recognise sources of dangers or malfunctions long before they can become expensive problems. That, too, is an important contribution to increased plant availability.

Networked service for faster assistance
And if a serious problem should arise, then our entire organisation will be able to quickly provide help. Because our Service team has access to all engineering and plant construction departments and is closely connected with all of them. Advantage: no long waiting times for replacement parts. Our service is available for you around the clock and all year long.

We stand for value-preserving maintenance, needs-based upkeep, quick troubleshooting and comprehensive repairs.

You are in good hands with us
To us, partnership means: assuming responsibility and supporting our customers to ensure that the plant is operating when it is needed. To make this happen, we are mobilising powerful resources. Our Service team has access to experts from all specialities, as well as state-of-the-art technology and logistics. A flexible organisation ensures that they will get to you quickly.
Product ranges of the Kraftanlagen Group:

Energy and power plant technology  
Decentralised power generation  
Underground piping systems  
Nuclear technology  
Industrial plants  
Utility services  
Fire protection  
Engineering  
Fabrication  
Welding and testing technology

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