



Emission Control Systems

GEA's solutions for clean air

There's change in the air

Industries worldwide are facing increasing pressure to comply with strict environmental regulations and, at the same time, meet growing production demands. For over a century, GEA Bischoff and GEA Process Engineering A/S have been assisting customers meet these challenges and remain compliant with long-term, cost-effective solutions.

A CHALLENGING ENVIRONMENT

As the world becomes increasingly aware of the effects that harmful emissions have upon the environment, governments today are enforcing ever more stringent directives on industrial businesses. In addition, pressure is likely to build over the coming years as stronger cross-border regulation comes into force and emerging markets gain momentum.

For many companies, these are challenging times. Complying with these new regulations often relies upon new technologies, installation expertise and ongoing maintenance – all of which require extensive resources to implement. Furthermore, with the growing demand for more product quality and quantity, companies must find new, cost-effective ways to increase output on one hand, while reducing toxic emissions on the other.



Emission Control

BETTER FOR THE ENVIRONMENT

For over a century, GEA Bischoff in Germany has been a world leader in the development, design and installation of emission reduction systems and technologies for customers in the process industries and energy sector. Together with GEA Process Engineering A/S in Denmark, the company behind GEA Niro Spray Drying Absorption, GEA Bischoff represents the strategic business unit "Emission Control". No other companies know more when it comes to clean air.

While Germany and Denmark act as core technology centers, we supply our systems worldwide via GEA's global network and other cooperation partners.

Our unparalleled innovation and expertise enables us to closely examine your needs, listen to your challenges and explore the most suitable technology to achieve the agreed-upon performance of your emission control solution. Not only does this provide lasting benefits for the environment, but keeps you competitive and compliant, now and for the future.

BETTER FOR YOUR BOTTOM LINE

A unique combination of technology leadership, process insight and global presence enables us to deliver world-class systems in accordance with quality, reliability and financing opportunities. This means our customers get a tailor-made, integrated solution that delivers optimum performance at the right capital cost. Our proven, comprehensive technology portfolio is customized for each client's specific requirements and is also designed to minimize operational and maintenance costs.

All equipment and parts are sourced from the highest quality suppliers on a case-by-case basis according to quality, locality, financial opportunity or even customer preference.

The GEA business unit Emission Control is backed by the resources, reach and capabilities of GEA Process Engineering, which is part of the global GEA Group. This enables us to offer unparalleled service with a complete understanding of your specific industry and needs. For over 100 years, we've helped protect both the environment and our customers' bottom line through innovative solutions and the flexibility to evolve alongside changing regulations.

GEA Process Engineering

Emission Control is a strategic business unit within GEA Process Engineering, a segment of the GEA Group, headquartered in Germany and listed on the stock exchange [G1A, WKN 660200].

GEA Process Engineering develops, designs and markets production plant equipment and processes for mainly the dairy, brewery, food, pharmaceutical and chemical industries. With a turnover of approx. EUR 1.7 billion in 2012 and approx. 5,500 employees working in 40 countries, GEA Process Engineering is recognised as a world leader within industrial drying, concentration, liquid processing, powder processing and handling, emission control, aseptic packaging and solid dosage forms & sterile products.



Long-term solutions

GEA Bischoff and GEA Niro technology set the standards for the industry, offering the most cost-efficient, high-performance technology available today. Our local sales, service and technology centers work closely with leading industry bodies and have the reach, resources and capabilities to deliver integrated, long-term solutions.

NON-FERROUS

GEA Bischoff focuses on cleaning gases that contain SO_2 , used to produce sulphuric acid, and covers roasters, smelting furnaces and converters for various non-ferrous productions:

- Copper
- Zinc
- Lead
- Molybdenum

CHEMICALS

We cover dedicated/special processes within the chemical industry, including:

- Titanium dioxide calcining
- Sulphuric acid recovery plants
- Fluid catalytic cracking units (FCC)

IRON AND STEEL

A range of technologies, from the GEA Bischoff scrubber to the LT-steel gas process, is available for many fields of applications, including:

- Coking plants
- Ore beneficiation
- Pig iron production
- Oxygen steel plants
- Electric arc furnaces
- Rolling mills
- Co-Generation



COMPLETE RANGE OF TECHNOLOGIES

Our technologies are capable of meeting the most stringent emission requirements with low operation and maintenance costs, including:

- Dust collection systems
- Dry, semi-dry GEA Niro Spray Drying Absorption (SDA) and wet DeSO_x
- DeNO_x
- Heavy metal removal
- Dioxin and Furan abatement
- Separation of acid components
- Additive technologies, such as energy recovery



ENERGY RECOVERY

GEA is recognised as a pioneer and world leader in complete heat transfer solutions thanks to our solid experience in process gas treatment and unique heat exchanger technologies. Our solutions include the use of the latest proven technology, such as energy recovery with Waste Heat Recovery Units and ORC (Organic Rankine Cycle), Waste Heat Boilers and cogeneration plants.

CEMENT

In the cement industry, the business unit provides tailored solutions, like low-pressure pulsejet filters (SCR), for the following:

- Kilns/mills
- Clinker coolers
- SCR

GLASS

GEA Bischoff provides gas cleaning systems in the following fields:

- Float glass
- Container glass

ENERGY

We provide gas cleaning by use of the GEA Niro Spray Drying Absorption process and GEA Bischoff systems for dedusting for multiple purposes within:

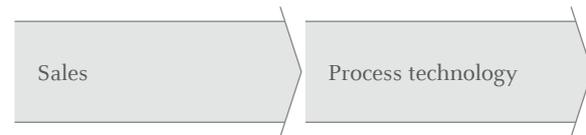
- Coal-fired power plants
- Waste incineration in waste-to-energy plants
- Captive power plants
- Biomass boilers
- Oil shale fired boilers



Clear thinking

GEA Bischoff and GEA Process Engineering A/S are dedicated to providing customers with specialised solutions to specific issues. With the industry's foremost R&D centers and a support network of over 40 companies worldwide, we offer highly specialised and tailored service across the process industry and energy sector.

PROJECT REALISATION FROM GEA BISCHOFF
AND GEA PROCESS ENGINEERING A/S



SUPERIOR RESEARCH AND DEVELOPMENT

Driven by customer needs, GEA Bischoff's R&D teams focus on optimizing existing solutions and developing new class-leading technologies, processes and systems.

Our two technology centres – GEA Bischoff in Germany and GEA Process Engineering A/S in Denmark – are pioneering emission reduction research and setting new standards for engineering technology and industrial process development. We also work in co-operation with many of the world's best research institutes, universities and government bodies and regularly implement research programmes sponsored by the public sector.



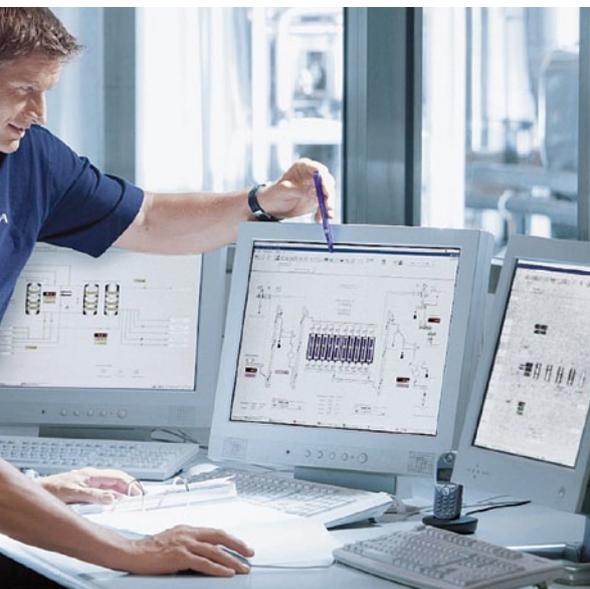


DEDICATED, PERSONAL SERVICE

At GEA, we take great pride in offering dedicated and highly personalized service. At the start of each project, you will be allocated a project manager with an in-depth knowledge of your industry, international regulations and our engineering solutions, and he will work closely with you to ensure that your business requirements are met, quickly and efficiently.

Our range of services includes consultancy, engineering, supply, assembly and commissioning of partial and complete plants, including noise protection, process automation and after sales service.

With the safety and protection of our customers and their environment as a primary concern, the Emission Control units of GEA Process Engineering are certified according to DIN EN ISO 9001:2008 and Safety Certificate Contractors (SCC**:2011).





We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.

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