CGS – your partner for process analytics
Dear readers,

We would like to take the opportunity to give you a brief insight into our company with this brochure.

For almost 40 years, we have been delivering analysis systems and components for continuous process analysis in various applications. We offer you a comprehensive range of services in the field of process analysis. From individual components in process technology through to fully assembled and installed analysis containers for online analysis.

As a result, satisfied customers from a wide variety of fields, such as power plants, plant engineering, chemical industry, refineries, and automobile and gas manufacturers confirm the high quality of the products and services provided by CGS.

**How did CGS come about?**

In the summer of 1975, I – Alfons Geyer – was sitting in my parents’ laundry and reflecting on how to fulfil my dream of “being my own boss”. At the time, I was employed as a planning engineer in a large German company and had already gained many years of experience in the field of analytics.

Feeling dissatisfied in my current job, I decided to take a new step. After six months’ of intensive planning, I laid the foundations of our current company group with the support of my entire family. And so, CGS was born.

I started out as a freelancer for planning tasks for my employer at that time, and finally ended up constructing complete analysis systems. So, it did not take long before we had to take on employees to support me in my work. Gradually, we won over a number of well-known companies for the collective know-how of CGS through responsible and quality-oriented work. Professionalism, above-average commitment and high quality characterised the work of our company, which led to our customers recommending us to others.

In 2007, my son – Christian Geyer – joined the company to ring in the next generation and gradually follow in my footsteps.

The projects have become ever larger and more numerous, with the result that we now employ over 120 employees on a production area of approx. 4000 m² at CGS. Constant investment in cutting edge
CGS PROCESS ANALYTICS

technology in the area of system planning and production ensures that our products are of outstanding quality. The greatest potential in all of the aforementioned are my qualified employees. The top priority at CGS is customer proximity and under this premises “almost nothing is impossible” in our eyes. We set out to find distributors worldwide so as to be able to further guarantee this priority. As a result, CGS now has contractual partners in North America, Europe, South East Asia and China.

We have developed the following scope of services through innovative technology and individual solutions in which you as a satisfied customer are the focus. From consultancy and planning, to complete analysis systems and individual processing components specially developed in our own laboratory through to after-sales service in the area of service and maintenance, we already have a well-rounded range of services which are used by many satisfied national (20%) and international (80%) clients.
OUR RANGE OF SERVICES

One-stop shop (turnkey)
The comprehensive knowledge of the CGS Group offers you a complete solution for your measurement task. As a result, you will receive a turnkey analysis system.

Offer
Based on your process data, you will receive a free-of-charge, obligation-free solution for your measurement task. This offer will already contain all the necessary components for the request in question.

Planning
After the order to develop an analysis system has been issued, our team will begin with the detailed planning. Here your process data will be used as the foundation for your individual analysis system. Naturally European or worldwide norms and their standards will flow into the planning process, depending on whether your system is located in Europe or elsewhere in the world.

Procurement
Only high-quality processing components are used in the analysis systems of the CGS Group. Our procurement group makes every effort to purchase these system parts under optimum conditions to provide you with a cost-effective solution.

Inspection
The finished analysis system will be available to you for inspection in our production halls. In addition to visual and workmanship testing, we offer you the opportunity to test individual system parts or the entire system with testing and comparison media before it leaves the factory.
OUR RANGE OF SERVICES

**Documentation**
The standardised documentation includes all the information necessary to operate the analysis system. This includes the system description, handbooks on the individual components, technical data sheets, and detailed piping and electrical plans. In addition to parts lists, certificates are integrated into the material characteristics and service conditions.

Multilingual documentation can also be created.

**Transport / customs processing**
Upon request, our logistics department will ensure seamless transport of your system to its final destination. Irrespective of whether it just needs to be brought “around the corner” or to the “end of the world”.

**Assembly**
After delivering the analysis system, we also offer you after-sales service to connect your system smoothly to the production plant. A skilled assembly crew will take on the required work and ensure the right conditions for a smooth start.

**Commissioning**
With the expert support of the CGS Group, the start of your analysis system in its particular measurement task will be problem-free. Wherever you are in the world, CGS’s employees will ensure a smooth start.

**Maintenance**
Comprehensive training programmes enable our service team to carry out the required maintenance work on your system and to guarantee the greatest possible operational availability.

Training and teaching your own personnel is naturally also part of the portfolio of the CGS Group.
During the planning and production of turnkey analysis systems for process controlling, CGS will deliver you a tailor-made, turnkey solution for your requirement profile. Our planning and project planning includes all areas from sample take off, sample processing up to the measurement device. The required peripherals such as containers, air-conditioning technology, electrical technology, utilities, etc. are also naturally integrated into a turnkey system.

From almost 40 years of experience in the field of system integration, we offer you a variety of standardised measurement systems for a host of different applications from the air separation, refinery, chemical and industrial sectors. A contact person from our project team will be at your service from the offer phase through to inspection of the finished analysis system, and ensure the technical and administrative implementation of your project. In the process, the 3 pillars of the system integration will be planned in close cooperation with you:
1. Choosing suitable analyzers. Here, we not only keep an eye on the technical aspects for you but also your budget.

2. Preparing the medium for analysis. Often neglected, CGS offers an inexhaustible wealth of experience and extensive KNOW-HOW at this point which we are pleased to place at your disposal.

3. The peripherals of the entire system. The electrical planning, air conditioning or effective distribution of auxiliary energies and utilities as well as outward-facing interfaces are important prerequisites for the sustained operation of your analysis system. Whether in ex-version, or not, in accordance with European standards or other norms, we know the ropes and will ensure that your system is standard compliant when it is sent to its starting place.
With our high level of vertical integration and large machine park, we offer you everything under one roof on our premises – your advantage: fast production times and no time losses due to outsourcing. In close keeping with our motto of “innovative technology for individualised solutions”, we produce your system components in our different production divisions. After the entire system has been produced, the final step is inspection on our premises. We put the system through its paces together with you or also with your end customer. Customer-specific inspection procedures such as 48-hour endurance testing of the analysis system, function tests with the control system or visual testing are carried out with our specialist personnel. Here all the standard testing media as well as specialist gases are available to us. After successful function testing of the analysis containers, incl. all sub-components such as the analyzers, trial activation and controlling, we will also take care of logistical side of things for you.
SYSTEM INTEGRATION

It does not matter where in the world your system is to fulfil its tasks, we will also assist you on-site with the installation and commissioning of your system to guarantee perfect interplay with your products. We will also support you after your project is completed.

If you so desire, the CGS service team will maintain your system over its entire lifetime.

Put us to the test during your next project. We are looking forward to meeting you.
Process analytics in chemical and petrochemical production plants is a challenging task which we solve with over 25 years’ of experience. Our long-standing customers greatly value the following benefits of our portfolio:

**Manufacturer independent system integrator**

The CGS Group is an independent system integrator. We use a wide variety of different analysis devices and fall back on national and international manufacturers in this regard. The individual solvability of the measurement task is decisive for the choice of suitable measurement device, as well as the efficiency/performance ratio of the analyzers from our customers’ perspective.

Process gas analyzer and process gas chromatographs from a wide variety of suppliers are in reliable service in our systems all over the world.

**Delivery of small trial processing systems through to analysis housing**

It is important to us that we can solve your measurement task. In this case, it makes no difference whether you require a complete analysis container or a single processing plate. With our specialist competence, we will deliver you exactly the system which corresponds to your technical and commercial requirements.
Manufacturing only in Germany for the respective country

Our manufacturing capacities are exclusively in Germany. With its highly qualified personnel and its high level of technology, this location has the very best conditions for the high-quality products and services of the CGS Group. Naturally, European or worldwide, local norms and their standards will flow into the planning process, depending on whether your system is located in Europe or elsewhere in the world.
The comprehensive knowledge of the CGS Group offers you a complete solution for your measurement task.

For example, from liquefied gas $O_2$, $N_2$, Ar, Kr, Xe to the gas phase, through to the physical measurement principle or further to controlling and archiving.

Remote servicing is not a foreign concept for our analysis systems. As a result, you will receive a turnkey analysis concept. The new or further development as well as optimisation of components in gas processing (e.g. Profibus coupling of the SAMs (secondary activation modul) is prioritised in CGS Group. The process analytics management system PAMS resulted from collaboration with LEITEK and is a new link in the process optimisation.
The analytics for air separators, tank depots or filling plants may include the following integral components:

1. Evaporators for inert gases like O₂, N₂ or CO₂
2. Transfer line cold/hot
3. Analysis container with
   a. sample rack
   b. bottle rack (Testing and calibration gases)
   c. analysis cupboard or rack
   d. SAMs – secondary activation modules
   e. Analysis devices of your choice
   f. Vapour recovery system
   g. PAMS – Process Analytics Management System
4. Operating terminals for filling trucks
5. Commissioning on-site
6. Training customers
7. Service
Exhaust analysis of combustion engines now places great demands on processing and measurement technology. Extremely small emission thresholds ensure positive environmental footprints and set high benchmarks for developers of combustion engines.

With the processing and analysis systems of the CGS Group, you will be prepared for the rapid development in exhaust emission technology. The 200°C processing modules hold your exhaust in a stable condition until it reaches the analysis system. This is an extremely important factor for a data basis on which entire motor series are developed and brought to series production readiness. CGS is a reliable partner with cutting-edge technology in this area.

**Individual modules (filters)**

From two-stroke engines through to marine diesel, there are a multitude of different measurement tasks. With individual processing modules, CGS offers a solution for virtually every measurement task.

**Hot exhaust prefiltration with low-maintenance filter cartridges**

With the unique double membrane filter technology, CGS offers an effective and reliable method to free hot exhaust from particles and guarantee reliable operation of analysis systems.

Whether large or fine particulate matter, the CGS filter technology works reliably.
Heated pumps
With exhaust pumps heated to 200°C, CGS guarantees a rapid response time for your analysis system. In this way, you will receive a reliable picture of the rapid reactions in the combustion chamber.

Design concept: controlling and hot components in a single housing
The stand-alone processing modules contain all the necessary components for operation in a single housing. This ensures smooth and reliable use in the rough test station.

Bus communication
Modern bus communication systems guarantee you flexible access to diagnostic data and permit remote access to switching and operating functions of every individual module in real time.

Thanks to the flexible controlling and communication, the linking of many testing cells to efficient processing systems is a further economic advantage of the CGS systems.

In-house production (consoles, etc.)
Its extremely high in-house production rate allows CGS to produce individual modules for end and OEM customers.
In this case, standardised module components made from high-quality materials are used to fulfil your specific requirements.
The products of our CNC custom manufacturing department are used both by our customers as well as in our own end production. In this way, we also rely on the same consistent quality as our customers. A small selection of the products used in our devices are depicted here. We use a diverse range of materials for our products. It makes no difference whether it is stainless steel, iron, steel, aluminium, coloured metals or diverse plastics. They can all be programme-controlled and processed quickly and reliably. This is why our motto is: “a perfect form and finish from every material”. Our experience and the right tools guarantee a consistently high level of quality. We produce turned and milled parts in many shapes and sizes. With our cutting edge turning and milling centres, we produce a suitable solution for almost every challenge.
IN-HOUSE PRODUCTS

Solenoid valve block, compact
Solenoid valve block, double block & bleed
Evaporator
Filter screw-ins
Heated transfer processing
Solenoid valve block, 2-row
Maintenance and repair of technical systems in the fields of analysis, measurement and control technology. Our on-call service can be reached at all times in the event of any malfunctions in the monitoring systems.

We offer services in the private sector, such as for:
- Incineration plants
- Automotive manufacturers
- Refinery and petrochemical industry
- Room air monitoring systems

We look forward to hearing from you.
Your CGS team

We also intend to expand our range of services further in the future and guarantee you a high level of quality. We are a training organisation in Region 10 so we are also able to support you expertly and professionally in the future.

We would also be pleased to assist you with financing. Please come and have a chat to us.
How to reach us:

- BAB A9 Nuremberg–Munich
- Exit at Denkendorf interchange (Exit 59)
- Turn right towards Beilngries
- At the roundabout (LIMES), take the third exit (Industrial area entrance 1)
- Take the first street on the left (Keltenstraße)

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