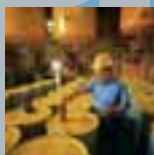


Siemens. Partner for the
bulk chemical industry.

chemicals



SIEMENS



The **challenges** bulk chemical plants are facing today.

The **quality** must be right.

Productivity, safety and resource efficiency are the key to economic success in the continuous production processes of bulk chemical plants. Only companies that continuously master these challenges meet the market demands for short delivery times, ensured quality and prices that are always in line with the market.

You know the factors required to achieve higher productivity in bulk chemical plants: a maximum degree of automation, consistent quality – and, last but not least, the highest possible availability.

Safety is the top priority.

The Siemens range of products and solutions is specifically tailored to these requirements. Top priority is placed on integration and openness – in all key areas from automation to drives right up to process instrumentation. These solutions are based on tried-and-tested industrial standards and are optimized to achieve the highest possible degree of economic efficiency throughout the entire life cycle of a plant.

How can your competitiveness be permanently ensured – even if environmental protection and safety regulations become stricter? Which solutions make your production process stable and efficient enough for you to be one of the global market leaders?

Productivity is determined by the **life-cycle management** of a plant.

We have the answers:

Our SIMATIC PCS 7 process control system. Innovations such as integrated Plant Asset Management and the Safety Matrix, specifically tailored to your technological process.

A plant must produce **around the clock.**



Nothing sells without **prices** that are in line with the market.

Our Competence Centers, e.g. for the chemical industry, focus on the specific requirements of the different industries. Here we bundle our Siemens expertise – from individual products right up to comprehensive solutions. And we always integrate experience gained from the continuous feedback we receive from practical applications.

Service and support must be available all the time.





Your requirements

Our solutions

The **quality** must be right.

Instead of the highest possible level of quality, your customers often only want and need a specific level of quality. But in all cases this quality must be achieved in a safe and consistent manner.

The right level of quality thanks to automation

With Siemens SIMATIC process automation solutions you'll always have your production under control and make optimum use of resources. And the innovative online analysis ensures that the desired, non-varying product quality can be guaranteed. From the first to the last barrel.

Safety is the top priority.

Whether interconnected systems or stand-alone plants – adequately meeting the high safety standards throughout the entire process chain requires a coherent and integrated safety concept.

Explosion protection and plant safety

Siemens offers a wide range of solutions that are seamlessly integrated – from components for applications in hazardous areas to integrated, safety-oriented controllers right up to high-resolution analysis systems.

Productivity is determined by the **life-cycle management** of a plant.

At some point in time the performance limits of a plant will be reached. Targeted upgrades, expansions and modernizations are often decisive to achieving better performance and protecting your investments.

Future orientation right from the beginning

The migration capability of our products and systems is integral to our solutions for the chemical industry. That's why solutions are created that are future-oriented – with comprehensible and thus predictable innovation cycles; solutions including products and systems whose main components are all developed and manufactured by Siemens.

A plant must produce **around the clock.**

The longer a plant is operating under optimum conditions, the more productive it is. Regarding the continuous processes in bulk chemical plants this means that any unscheduled plant downtime is a pure loss.

Process control system for the highest degree of availability

With SIMATIC PCS 7, Siemens offers one of the most flexible and powerful process control systems in the market. SIMATIC PCS 7 can be configured with redundancy on all levels based on open industry standards such as PROFIBUS or Industrial Ethernet.

Nothing sells without **prices** that are in line with the market.

There is an ongoing price erosion in the bulk chemicals market. To be successful in this market, you must not only produce cost-effectively, but also include the expenses for raw materials and equipment in your overall strategy.

Fully integrated production

Siemens coordinates information and decisions – horizontally throughout the entire production process and vertically from the ERP level right down to the field device level. State-of-the-art automation technology solutions support the productivity of your processes. For example, SIMATIC IT helps you operate the system at the optimum operating level whenever required.

Service and support must be available all the time.

When producing worldwide, you also need to be absolutely certain that everything is running smoothly at your locations all over the world. Global service and support play a key role.

Service and support around the clock

Siemens solutions are designed to achieve both the highest possible degree of availability and low maintenance overhead. If you need us we will support you around the clock anywhere in the world: with the Siemens Customer Support and the Siemens Spare Parts Service – 24 hours a day every day of the year.



Siemens offers you everything you need for first-class production: from sensors to power distribution to process control systems, from the planning phase to service. Everything from Siemens – with the highest possible degree of openness. Cutting-edge standards are the basis for our solutions. Let us show you some examples.

Siemens provides you with the **basis** for success.

The basis for your productivity – Totally Integrated Automation

Totally Integrated Automation (TIA) combines production and company processes into one system – with uniform configuring, data management and communications. The advantages are clear:

- Highest possible degree of investment protection – thanks to innovative, future-oriented developments
- Reduced complexity – thanks to standardized hardware and software components
- Higher productivity – thanks to reduced interface losses
- Lower life-cycle costs – thanks to reduced maintenance and spare parts expenses
- Highest possible degree of plant availability – thanks to integrated safety tools

The processes are under control

Optimized processes are critical for the productivity and for the economic efficiency of a manufacturing facility. We support you with our field-proven products and solutions.

Controlling processes, optimizing processes – SIMATIC PCS 7

With SIMATIC PCS 7 your plant is controlled by a state-of-the-art system. The design and architecture of the process control system ensure cost-effective operation of the plant throughout its entire life cycle – from the planning and engineering phases to operation and maintenance. Not only in the production process itself, but also in all secondary and downstream processes of bulk chemical plants as well. It is extremely flexible and modular and thus can help you solve any task from laboratory to system networks – both centralized as well as distributed.

Focus on life cycle – Plant Asset Management

The impending failure of a component is usually detected early, for example, by increased energy consumption or a considerable decrease in performance. The asset management solution integrated into SIMATIC PCS 7 provides the respective diagnostics data and decision support. With the help of this information, maintenance staff can initiate the necessary maintenance work immediately or wait until scheduled idle times, depending on the urgency of the matter. Innovative maintenance concepts – for enhanced plant availability and a longer service life of your components.

Optimum connections, even in hazardous areas – with PROFIBUS

PROFIBUS ensures that you are provided with direct access from the operator station right down to the field level. The international PROFIBUS DP/PA fieldbus standard is used worldwide and forms the basis for distributed automation solutions – even in hazardous areas.

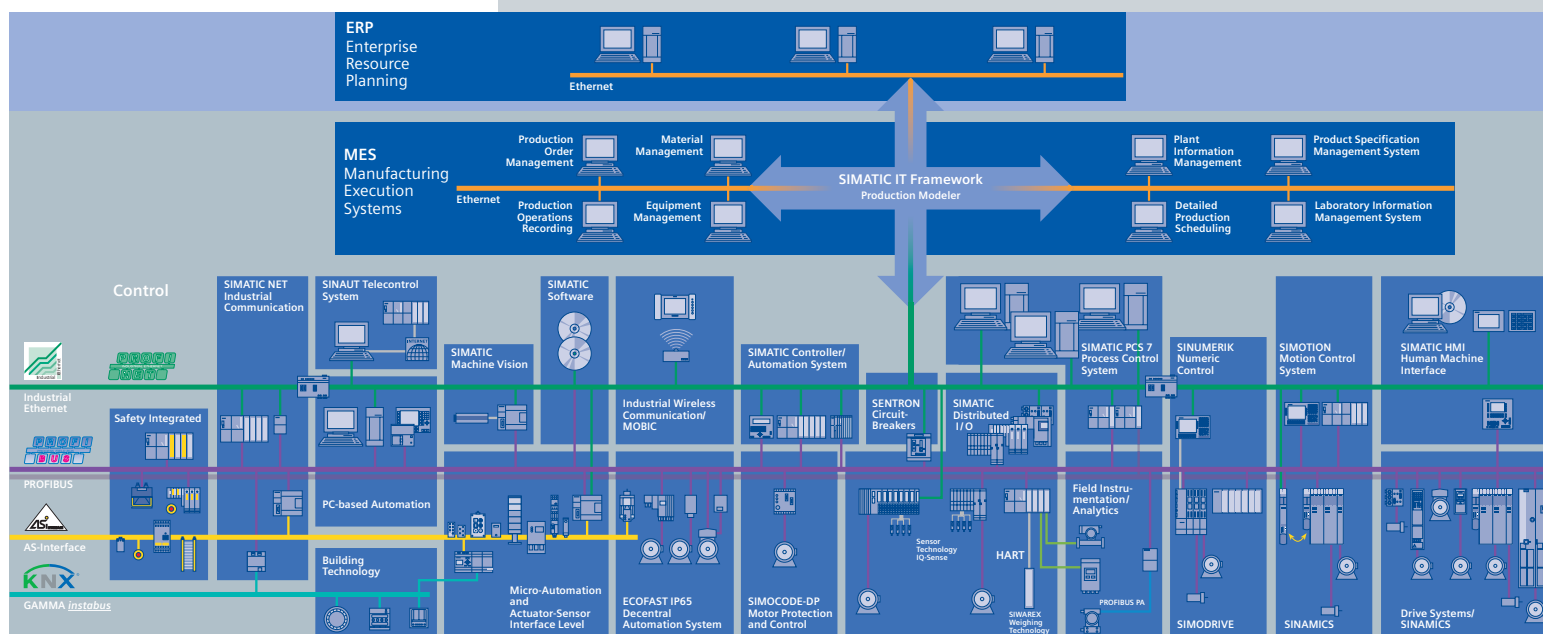
Safety without weak points – Safety Integrated

SIMATIC Safety Integrated is our comprehensive range of products and services for safe, fault-tolerant and high-availability applications in the process industry. All components are designed to detect critical signals quickly and to respond to and process them according to a predefined logic. SIMATIC Safety Integrated is completely integrated into standard automation and thus ensures the maximum degree of safety throughout the entire process chain.

Transparency means efficiency – MES with SIMATIC IT

The integration of data is the basis for optimized operations control. Our solution: linking MES with SIMATIC IT. Based on standardized products, both industry-specific modules as well as individual solutions can be implemented quickly – the smooth way to achieving enhanced transparency and ideal process control.

Throughout the entire life cycle of your solution, you benefit from costs that can be planned reliably and from a partner you can completely rely on in every project phase – from the planning phase to operating and upgrading. Demand this life-cycle partnership. We look forward to it.



*Integrated throughout the entire process level right up to the ERP system:
Totally Integrated Automation – or simply our concept for your success.*

For quick and direct additional information, go to:

www.siemens.com/chemicals

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