

There are some processes  
between heaven and earth  
that we do not control and regulate –  
but precious few!

# STANGE EXCELLENCE

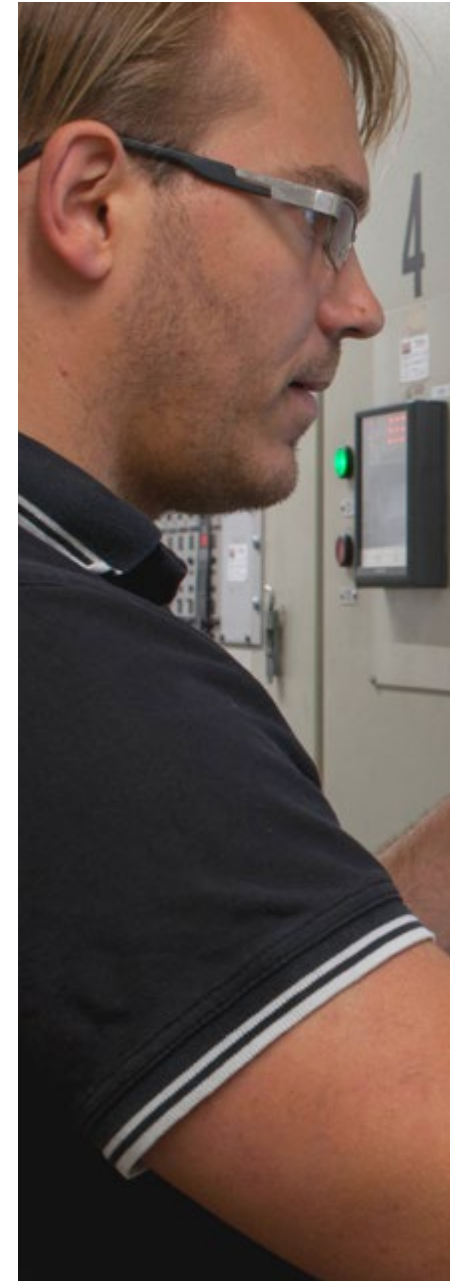
We always think and act from the perspective of our customers' procedures and processes.

Self-explanatory, simple and intuitive. Measuring with high precision, even in the smallest space. Individually adapted to the conditions they will face on site. Multi-compatible with their environment and absolutely reliable. These are our program controllers, regulators and sensors.

They are flexible. They can be used in a wide variety of customer environments to control, regulate, measure and document thermal processes and procedures with the highest precision.

What sets us apart is our experts' passionate hand-in-hand approach for software, hardware and process engineering. And our customers love the difference: how astoundingly easy our products are to work with, their compatibility, their high quality and our completely bespoke advice and support.

That goes way beyond mere satisfaction. Our innovative power comes from the passionate joy of being a clear step ahead of the rest in what we do, in everything we do.





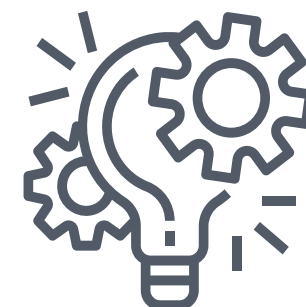


K. + H. Fischer GmbH

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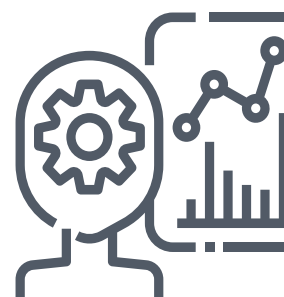
## PROJECTS A YEAR

Our project engineers are in action around the world. On site, they adapt our program controllers and regulators to the customer's individual processes.



## ENGINEERING

Our range of services is comprehensive: project planning, installation, commissioning, instruction and training, electrical installation, electrical cabinet construction and technical advice.



## DEVELOPING

We get a feel for potential solutions that our development engineers exploit with proactive and customer-specific software and hardware solutions.



## MADE IN GERMANY

We're all about longevity and security in your investment and planning. All our products are 'Made in Germany' and have an after-sales guarantee: a minimum of 10 years in-service repair or direct replacement.

# THE WORLD OF THERMAL PROCEDURES

Industrial furnaces – autoclaves – environmental simulation systems:  
high-precision control – regulate – measure – document.

We have an in-depth knowledge of a wide range of procedures and their processes, so we know how they can be best controlled, regulated, measured and documented.

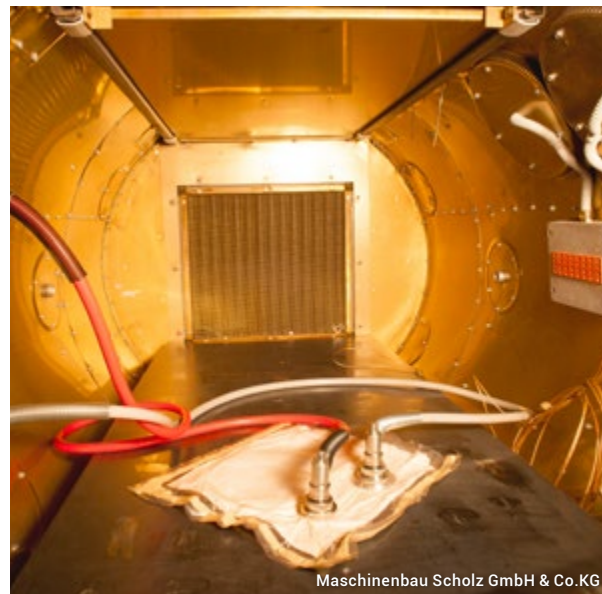
Even beyond that, we often also discover potential for improvement. The energy management system we developed

using batch-specific energy acquisition and our patented H<sub>2</sub> sensor for the process of controlled gas nitriding are good examples of this; we are the unsung champions here.

We adapt to the individual, specific requirements needed for applications, for example in the areas of:

food, pharmaceutical, glass, aviation, ceramics, plastic and metal. Our customers include manufacturers as well as plant operators for autoclaves, industrial and hardening furnaces and environmental simulation systems.

STANGE products are compatible with the Siemens world.







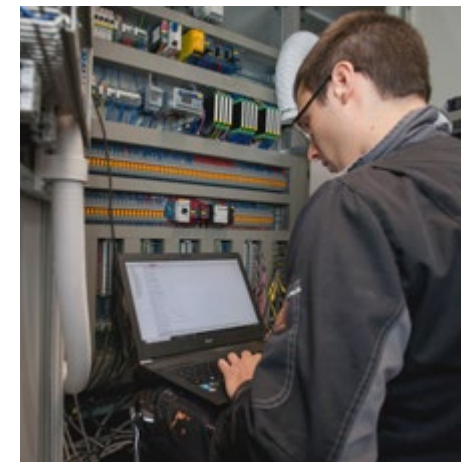
## WE KNOW HOW – FOR EXAMPLE

Sintering	Impregnation	Nitriding
Annealing	Hardening	Carburizing
Drying	Curing	Environment simulation
Sterilising	Vacuum hardening	Heat treatment
Cooking/Simmering	Tempering	Mixing
Smoking	Strengthening	Coating



# THE WORLD OF CONTROL TECHNOLOGY

The seventh generation: networked, automated, barrier-free –  
smart entry card to the 4.0 era



## CONTROLLERS



## SENSOREN



## SOFTWARE



## SERVICES

The be-all-and-end-all for our development engineers is to keep up with the times and always be a clear step ahead. This mindset is recognisable in everything we do, and above all in the smart details found in our products. Our generation 7 controllers are fascinating in their technical design. They are the first industrial controllers to be as comfortable to use as a smartphone. Capacitive touch, open and finished system for the Siemens world, able to individually

integrate into a wide variety of processes and in decentralised peripherals. Our product range is supplemented by intelligent, sometimes patented sensors for nitriding or carburizing control processes. The four pillars of our portfolio – controllers, sensors, software and services – make it possible to provide our customers with truly holistic products and services.





# ZEITGEIST. PROBLEM AND SOLUTION

We have an affinity for usability –  
from generation to generation, always one step ahead!



## GENERATION 1



## GENERATION 2



At the end of the seventies, programmers came into the digital age. Rising to the challenge of the revolution in industry, the first microprocessors were used in Germany. This led to the first digital programmer: process control became more accurate, reproducible and programmable.

The first freely configurable program controller arrived on the scene in the mid-eighties. A genuine innovation! Monitors could offer coloured and monochrome illuminated panels. This made process monitoring much easier for operating personnel.





## » GENERATION 3



Our goal by the late eighties was to transform the programmer into a program control system using visualisation. Programmers and controllers were merged into a single unit. That made the third generation cheaper. In addition, it could be integrated into higher-level controllers:



## » GENERATION 4



Program management, online monitoring, visualisation, data logging – all in real time and under central control. At the beginning of the 1990s, we introduced the fourth generation with an integrated PLC function and up to 20 control zones: a more compact design and really high performance.

# AUTOMATION EXCELLENCE

Generation 7 brings the dawn of a bright new age:  
it goes without saying – reliable, complex yet simplicity itself!



## » GENERATION 5



Our decentralised CAN bus system came onto the market at the end of the nineties. This greatly simplified cabling. For the first time, our devices had the option to be equipped with a Profibus interface to the Siemens world. Once again, controlling and regulation became even more convenient, faster and cheaper.

## » GENERATION 6



At the beginning of the millennium, we expanded our project department and established ourselves as specialists in process engineering. The sixth generation responded with integrated high-performance PLC and once again brought significantly better usability. We introduced infrared touch, colour LCD monitors and data loggers.







## » GENERATION 7



It alerts. It is both programmer and program controller. It is universally compatible and compact. It's got what it takes: software function modules that adapt to individual control tasks, decentralised CANopen peripherals, multi-channel data loggers. The integrated PLC function links the function blocks with each other, then records and saves all the process parameters.

Our Generation 7 really does leave nothing to be desired. It has a stainless-steel case and a glass high-resolution display. And the crowning glory: a capacitive multi-touch screen. As easy to operate as a smartphone. Controlling, regulating, measuring and documentation have never been so convenient. It is your access-all-areas pass to the 4.0 era.

# AT A GLANCE

All quality processes at STANGE Elektronik are based on DIN EN ISO 9001:2015 and meet all their specifications.

## PRODUCTS

### Program controllers / regulators

- SE-701 program controller
- SE-702 program controller
- SE-404-702 conversion box
- SE-707 program controller
- SE-604 industrial control
- SE-607 industrial control
- SE-609 industrial control

### Sensors / probes

- H2 hydrogen sensor
- H2 sensor with digital display
- O2 oxygen sensor
- O2 sensor with digital display
- Oxygen probe
- Portable gas analyser

### Decentralised periphery

- SIOS I/O system
- CAN I/O system

### Software

- ECS process control system
- Process step wizard
- Nitriding potential module
- Nitriding potential simulation
- Diffusion calculation for carburizing processes

## CUSTOMER WORLDS

- Industrial and hardening furnace builders for different hardening procedures
- Industrial furnace manufacturers for thermal plastic, metal, ceramic processing
- Autoclave manufacturers in the areas of food, pharmaceuticals, glass, aviation
- Environmental simulation system builders in the areas of test consoles, test chambers, test benches
- and much more

## SERVICES

- Engineering / Project engineering
- Installation
- Commissioning
- Instruction and training
- Electrical assembly
- Electrical cabinet construction
- Technical consultancy
- Repair centre for short repair times
- Free support hotline



Härterei Reese Bochum GmbH





# TWO STEPS FORWARD A YEAR

STANGE EXCELLENCE means:

we take satisfied customers and work to make them delighted customers.

This is the essential icing on the cake that pays dividends because we focus on what we need to improve to make procedures and processes simpler, more accurate and more economical. Noticeable improvements, surprising innovations and trustworthy cooperation have become indispensable. It is 50 years since the PLC was first

invented, and plants and machines, procedures and processes no longer bind us anywhere near as much as they did in the early days of the new industrial revolution. Now, in our era of digital revolution, the key is to master the complexity of our digital world and make the most of it; trust, cooperation and a win-win mentality are the essential

precursors to be able to rise to the challenge. This is what makes it possible to bring an average of two new developments per year to the market. Our current ones are the capacitive touch screen and our latest automation device, the 701. Lilliputian in size, nonetheless a full-blown automation device in terms of performance.







# LOCATIONS & AGENTS

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