

EST: 2005

#### Home of excellence



**spoiled by the sun,** extrutec GmbH has been located in Moos, in the immediate vicinity of idyllic Lake Constance, for more than 20 years.

More than 90 highly qualified, exceptionally experienced and motivated colleagues work spread across the extrutec locations (in Germany and the USA) for the benefit of you, our customers. extrutec has steadily worked its way up to become a technology leader in all of its specialty areas. Continuous improvements and new developments will continue to strengthen this position in the future.

See for yourself. You are welcome to visit us and experience the performance and innovative strength of our company at any time. I promise you that our legendary hospitality will make your stay a special experience, and not just in technical terms. I can assure you of that with a clear conscience.

See you soon. Sincerely yours

Uwe Günter | Managing Partner/CEO



### This is extrutec.

# CREATING TECHNOLOGY

Driven by values, providing technologies that create added value.

Uwe Günter



From the very beginning, extrutec GmbH has focused not only on making the existing better, but above all, to develop new ideas and solutions, driven by customer requirements.

The team of experts at extrutec is the key to success – with its expertise and innovative strength it drives forward pioneering solutions.

Joachim Sokoll Business Unit Manager Thermal Equipment





Jan Günter Business Unit Manager Sales/Business Development



Stefan Beer Business Unit Manager Electrical Furnaces / Induction technology

Michael Schindler Business Unit Manager Commercial







# constant dialogue with its customers.

# problems, but also sets the course for

One of our company's strengths is the ability to systematically refine the properties of our products based on market and customer requirements and to develop resource-saving, environmentally friendly and sustainable solutions.

We make our process expertise available on a permanent basis and develop solutions for the needs of tomorrow. We attach great importance to constantly improving the energy consumption and efficiency of our systems and developing

World's first EHKO online and offline installations

# From the idea to the patent.

energysaving

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— by**e trutec**" —



This technology ensures an individual energy supply for each heating section, depending on the required process-related temperature gradient. Due to the higher temperature, the nose section of a taper furnace always requires more power than the tail section of the billet. This results in very different degrees of utilization of the respective heating sections.



The ESU (Energy Saving Unit), patented worldwide by extrutec, uses water as a medium to preheat the metal to be heated. Originally, the ESU was only used in conjunction with extrutec gas furnaces. The energy required came from the exhaust gases of the furnace.

Today the ESU is used for preheating systems of all types of heaters. When used with an induction furnace, the energy required comes from the waste heat of the coil. The ESU can even be used with the high-velocity convection furnace (EHKO). Any waste heat source in the customer's plant can be used for this purpose, e.g. waste heat from cooling compressors, etc.



With the extrutec digitisation software machine data is analysed to optimise production. This software enables the next level of data-based machine optimisation – #NextLevelExtrusions.



With rising energy costs and the need for climate protection, the demand for energy-efficient and sustainable production processes is growing.

extrutec has responded to the general market demand and developed the Eco Heating Process, an energy-optimized heating process for the most energy-efficient production possible.



The Alpha Flex Technology is a further technical development of the existing extrutec profile quench system.

The axially swivelling nozzle stocks consist of a twochamber AL extruded profile. extrutec closes the previously large " $\alpha$ -gap" between air and water cooling with the patented Alpha Flex Technology with  $\alpha$ -values between 500 and 1,000 W/m<sup>2</sup>K.

#### More patents by extrutec:

The inline furnace (combination of gas and in-line induction heating) has been an extrutec patent since 2012. The system, which has undergone various improvements, is now known as the inline furnace 2.0.

Another patent is currently pending, and it covers the combination of an electrically resistance-heated system with the induction furnace connected in line.

### Warm up.

Induction technology for all metals: aluminium, copper, brass, stainless steel, ...





single source. extrutec is the only supplier to offer all types of heating from a single source. Advantages such as the elimination of an interface, the latest inverter technology, highest efficiency, precise temperature control and low-maintenance design make our furnaces the ideal choice for your future requirements.



Stainless steel

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Hybrid systems flexibility and efficiency The patented extrutec inline furnace combines gas and induction heating in a single axis, resulting in minimal space requirements, high efficiency and reduced investment costs, making it ideal for demanding applications such as the automotive

industry.

Providing base heating with gas and adding a precise induction taper is a market leading concept. The stand-alone system with a separate induction furnace complements this with flexible production options, e.g. for pre-cut billets or billets of different alloys.











#### The ESU (Energy Saving Unit)

Whether for an induction furnace or a high-velocity convection furnace (EHKO), the ESU is used to preheat the billet by utilizing either an external heat source or the energy from cooling the induction coil.

## The hot phase.

**ESU – the Energy Saving Unit** The ESU significantly reduces the gas consumption of a furnace by 14–18 %.

The combination of a gas inline furnace with upstream ESU is known as the extrutec Eco Heating Process<sup>™</sup> and represents the most efficient possible heating process with gas base heating.

#### Gas-fired rapid heating furnaces

extrutec gas-fired rapid heating furnaces are the benchmark in the field of furnaces for the extrusion industry. Extremely high uptime, minimal maintenance requirements and high efficiency are just a few of the many outstanding features.

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Furnaces with an unprecedented level of performance and the highest throughput per length of furnace are the result of decades of experience and continuous improvement. The extrutec transport system with its maintenance-free and wear-free rollers is unique in the market. Countless details result in an unprecedented ease of maintenance and maximum system uptime.

Improvements such as dynamic temperature measuring cycles, not only result in an improved efficiency but also increasingly interlink the hardware and software of extrutec systems.

# Cutting, handling and preparation.

#### Die ovens

Whether simple cheststyle ovens or fully automated overhead ovens, extrutec is able to deliver any type of die ovens. The latter can be operated with an inert gas atmosphere upon request. We are the only manufacturer to supply ovens with the inner housing welded gas-tight.

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#### Hot and cold log saws

extrutec log saws, whether designed as hot or cold saw, are another top product with many unique features. e.g. 5.5 mm kerf for a 16 inch log is unrivaled in the market.



The absence of any hydraulics makes our saws extremely easy to maintain – an advantage that maintenance departments greatly appreciate.



#### Log storage systems

Whether a simple gravity log storage table, a lownoise chain-style magazine or a vertical log magazine with log lift, extrutec offers maximum material density, flexibility and batchspecific storage solutions in the smallest of spaces.



Although the investment costs are higher, at the same time it results in significantly reduced consumption of inert gas.

#### Log cleaning systems

extrutec high-pressure cleaning systems clean the logs very effectively using hot water at 210 bar. This improves the profile quality, extends the die life and protect the rough cast surface, which increases the efficiency of the gas furnace.

Alternatively, extrutec also offers a non-rotating brush cleaning system. Brushes which completely surround the log are pressed against it with very little pressure. During the forward movement of the log the log is brushed gently but effectively.

The unit can also be equipped to measure the straightness of the logs and subsequently reject out of tolerance logs.



### From hot to cold.

#### Ageing ovens

Depending on the available space and mode of rack transport, different oven concepts are employed.

In addition to conventional floor-mounted ovens with longitudinal rack transport using roller conveyors, overhead ovens or floor-mounted, side-opening ovens are also offered. Together with an automatic shuttle system for loading, this not only saves a tremendous amount of space, but full automation of the entire system is also achieved.

extrutec ageing ovens differ significantly from other solutions in the market due to the very tight temperature tolerances of +/- 3 degrees and the double crossflow ventilation.









Software-based simulation of initial cooling parameters

#### Profile Cooling Systems

"Utilizing the Alpha Flex Technology, we make it possible for our customers to reduce the use of air cooling to a minimum."

This will result in better material properties, optimized production and significant energy-savings of the cooling process.

The nozzle stocks are arranged perfectly parallel to the profile and swivel motor actuated, longitudinal multi-zone pressure control with proportional valves and visualization of the profile geometry (real data) are some of the unique features of our quench. Continuous alloy optimization leads to ever more demanding equipment technology.

# Our passion is your success ... that is TCT.

#### The right solution for every material.

TCT Induktionstechnik is a wholly owned subsidiary of the extrutec group. We support you as a reliable and efficient partner for all repair and service work in the field of induction furnaces and induction systems of all kinds.

As a manufacturing company, we also ensure the production of induction systems and electrically heated furnace systems in cooperation with our parent company. Our highly qualified team is continuously expanding our service and manufacturing range.





We firmly focus on the needs of our customers. Please experience our efficiency and our passion for induction technology during a visit to





Our goal: continuous improvement

extrutec

TC!





With the takeover of TCT by extrutec at the beginning of 2021, the production and maintenance of induction heating systems became a new focus.

In future, TCT Induktionstechnik will also pursue its own projects in the field of heating a variety of metals.

In 2026, the production area will double with the opening of an additional new building.





# Discover the future!

Preserving what is good and developing it further

employees, for the benefit of our customers and our shared environment.

Driving innovations

e trutec<sup>®</sup>

Protecting resources







e trutec 



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