

NEWS.

THE SCHWANOG NEWSPAPER FOR CUSTOMERS,
EMPLOYEES AND FRIENDS OF THE COMPANY.

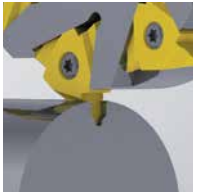
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Already firmly established in Bavaria:
Thorsten Schneider, our territory manager for Bavaria, has been working with us since he took over this area in November of 2018....



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Machining of grooves, the most productive way:
We reduced set-up times and lowered coating costs with the eight piece 3-edge insertable WEP tooling system...



Unit cost reduction of 34%

**MEA-PROTECC ENTHUSIASTIC
ABOUT PROFITABILITY OF THE
SCHWANOG SOLID CARBIDE
DRILLS!**

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EDITORIAL:

Dear business partners,

In this current, 3rd Newsletter of 2019, our editorial team again, has compiled interesting stories for you from the Schwanog world.

The title theme comes directly from the heart of the production of our customer MEA-proTecc, whom we portray on page 2 of this News, and present an enormously productive project with our solid carbide drills.

These are becoming increasingly established on the market and prove that know-how and technical perfection can generate above-average cost advantages for our customers.

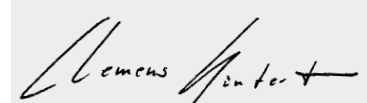
On page 3 we would like to draw your attention to the topic of the machining of grooves. The project presented shows how, as an alternative to conventional solid carbide milling cutters, our insertable WEP tooling system can significantly reduce part costs.

On page 3, we also look to China, where our new production site offers us even better opportunities for further growth.

How to machine internal grooves with increased tool life, reduced machining time, and higher precision, is shown on page 4 with the 3 cutting-edge WEP tooling system.

And last but not least, we would like to draw your attention to the review of the EMO, the Advanced Manufacturing Expo shows as well as the WIMTS show.

We would be delighted if these stories provide you with new impulses to seek ways of production optimization - in this spirit let us successfully master the third quarter of this year together!


Clemens Güntert
Managing director

SCHWANOG

Impressive unit cost reduction of 34%:

MEA-PROTECC BENEFITS FROM SCHWANOG SOLID CARBIDE DRILLS!



Within the last 25 years, MEA-proTecc GmbH, based in Hildesheim, has developed into one of the leading manufacturing service providers for precision parts and complex assemblies made of metal and plastic.

MEA-proTecc sees itself not only as an outsourcing partner, but also as a development and optimization partner that accompanies its customers from the development and prototype phase through to series production. This includes individual turned parts, milled parts, laser parts, bent and stamped parts, as well as finished packaged end products for various luxury market segments.

Broad-based manufacturing strategy

The company's customers, who are often technology leaders drawn from all sectors of industry, can rely on in-depth know-how and technical creativity. MEA-proTecc offers its customers the security of always having the most economical solution for the respective requirement by utilizing the most diverse manufacturing technologies.

In our module assembly area a wide variety of precision parts, such as aluminum milled parts, plastic turned parts, bent wire parts, stainless steel laser blanks, and metal stamped parts are often assembled to form complex mechanical and electromechanical modules. This in turn requires an extensive technology park to cover an extremely wide range of machining and non-cutting processes in metal and plastics; such as the manufacture of precision aluminum milled parts, brass turned parts, screw machine parts, and laser blanks.

The customer promise is quality and cost optimization

The promise of MEA-proTecc is clearly oriented towards the optimization of quality and costs. With this, the company also offers a first-class basis for cooperation with Schwanog, which has successfully positioned itself as the cost reducer in the market.

Klaus Rosenfeld, who works in technical sales for Schwanog, saw this as a great opportunity to successfully contribute the expertise of THE specialist for tooling systems.

The Schwanog solution achieves a unit cost reduction of 34%.

To optimize what's already considered excellent, is both a challenge and an art, as Schwanog territory manager Klaus Rosenfeld has repeatedly demonstrated.

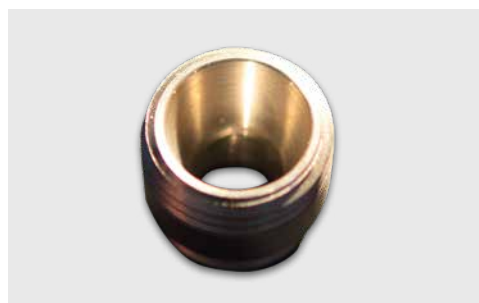
The current project with MEA-proTecc involved a component that required a machining time of 108 seconds with conventional tools. The target set by MEA-proTecc was very ambitious with a turnaround time of around 90 seconds.

Klaus Rosenfeld coordinated with the Schwanog technical team in order to present a solution that would really impress the company, and it did! After setting-up the Schwanog solid carbide form drill, the machining time was reduced to 71 seconds, which meant a reduction of more than 30 seconds.

In addition, it was possible to eliminate the need for a second drill, which also led to a reduction in set-up time. Schwanog was also able to excel with process reliability, because the Schwanog form drill achieves a tool life of around 1400 drill holes on a Nakamura Tome WT-150, Fanuc 30i, 2-channel.

"The entire optimization process with Schwanog has left us completely impressed: from the first project meeting with Mr. Rosenfeld all the way to the support of the set-up of the Schwanog solid carbide form drill on the machine. The optimization achieved, has exceeded our targets by far!"

Mario Dembowski, Production Manager



In the light of their first-class experiences and the harmony of their values and goals, both partners have agreed to work together on further projects.

Already firmly established in Bavaria:

THORSTEN SCHNEIDER HAS OPTIMALLY WORKED HIS WAY INTO THE BAVARIAN MARKET!



Thorsten Schneider, our territory manager in Bavaria, has been working his way into the sales area since taking over in November 2018. Initially, he successfully completed a solid apprenticeship as a precision mechanic with a focus on mechanical-engineering. After completing his apprenticeship, he worked for a Bavarian manufacturer of precision parts where he programmed, set up, and optimized prototypes and production runs on various CNC twin spindle lathes.

The next logical step was further training as a master craftsman in precision mechanics. After that, Mr. Schneider became responsible for programming and the use of tools as head of the turning department, including technical support.

With his broad know-how and his work focused on precision and unit cost reduction, he has already contributed to the success of our customers in many different projects.

Use our new resources in Bavaria for your projects:

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Milling grooves the most productive way:

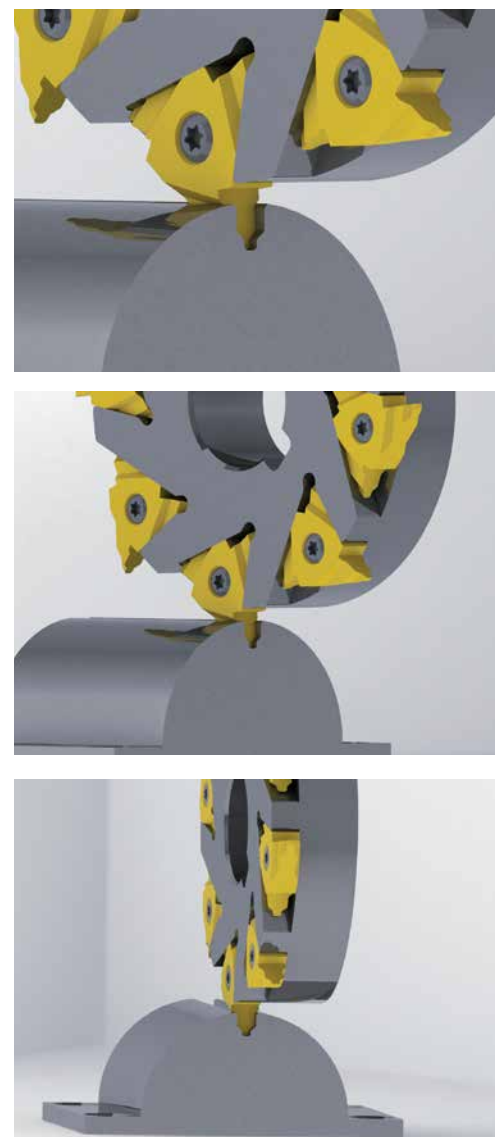
SCHWANOG WEP TOOLING SYSTEM WITH 8, 3-SIDED CUTTERS!

Milling of grooves is a typical application when machining precision parts. Solid carbide milling cutters are still used, although there are alternatives which significantly reduce both setup times and part costs.

Probably the best machining alternative is the Schwanog WEP tooling system with eight insertable tools, each tool carrying 3-cutting edges. The benefits are reduced setup times, lower coating costs, and elimination of the time consuming regrinding process.

Advantages:

- ❑ **No regrinding**
I.e., the time-consuming regrinding of solid carbide milling cutters is completely eliminated.
- ❑ **Lower coating costs**
Coating costs are significantly lower as only the insertable tools are coated and not the entire tool.
- ❑ **Lower setup costs**
Once worn, the 3-edged tool is indexed or exchanged -the cutter body remains in calibrated position.
- ❑ **Maximum flexibility**
The cutter body is universal, i.e. with new geometries, only the insertable tools are changed.
- ❑ **Significant cost reduction for family of parts**
When manufacturing family of parts, setup times can be significantly reduced due to the universal cutter body.
- ❑ **Reduction of tool balancing times**
Tool balancing already takes place directly in the 3D design phase and thus lowers the setup costs on the machine.
- ❑ **We can do both**
Generally, we are able to manufacture standard as well as special milling cutter bodies.



Latest Schwanog China News:

FURTHER GROWTH AS THE COMPANY MOVES INTO A NEW PRODUCTION SITE!

With the move to a new production site directly next to the previous location, the area available for production and administration has almost doubled. With generous production areas for expansion the new location offers the best conditions for further growth.

The relocation and setup of the machinery was preceded by intensive planning. The team with Franz Hummel, Karl Dressler and Carsten Schwabe was vigorously supported by our Chinese employees. The production machines were set up exactly within the scheduled time frame and the interaction between suppliers and Schwanog employees from Germany and China was extremely well coordinated and the high level of motivation was noticeable in everyone involved.

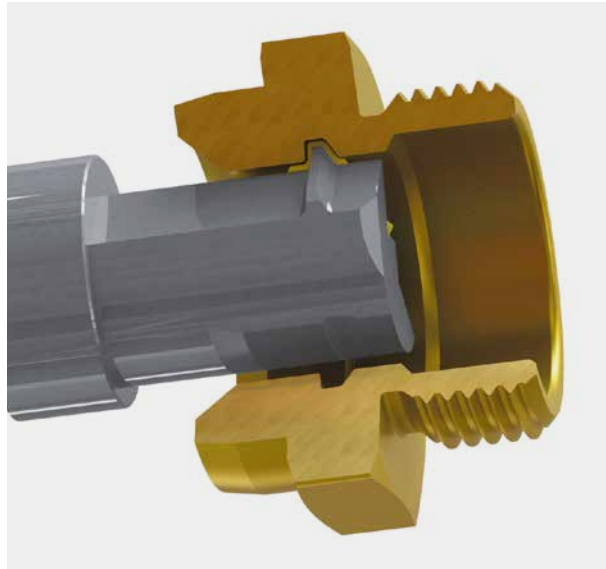
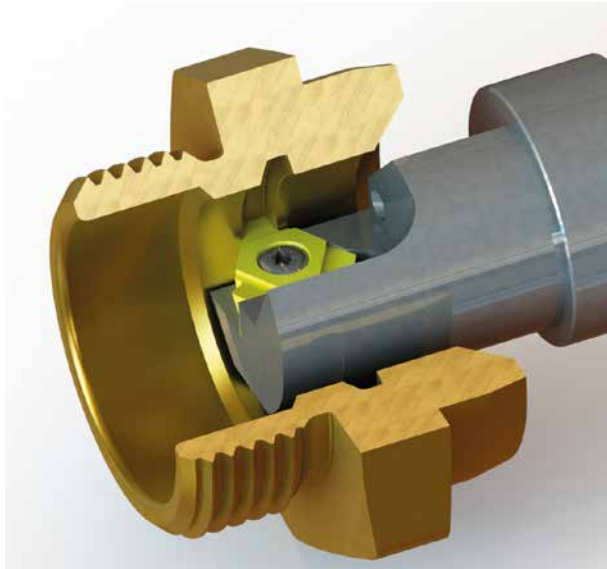
Administration and sales with a total of 5 employees have also moved to larger offices. We will continue to expand our sales activities in order to serve our customers even more intensively. General manager Gökay Dumlupınar thanked his colleagues from Obereschach and his Chinese employees for their tremendous efforts.

Schwanog China will be able to benefit fully from the simultaneous intensive exchange of ideas on production processes and quality standards.



Internal grooves established efficiently:

3-SIDED, INSERTABLE WEP TOOL WITH LONGER TOOL LIFE AND SIGNIFICANT CYCLE TIME REDUCTION!



A current and very impressive example is the WEP insert with 3 cutting edges used as a lay down tool for machining of internal grooves.

Whether tool life, machining time, or precision, the WEP insertable tooling system is convincing across the board.

Advantages:

- ❑ Shortest set-up times when changing tools, as only the insert is indexed or exchanged and not the entire tool
- ❑ Longer tool life and more stability due to the direct contact of the holder with the insert
- ❑ This reduces dimensional deviations due to the cutting pressure during the cutting process
- ❑ Holder available in all common versions with coolant-through
- ❑ Groove including all chamfers can be achieved in one operation
- ❑ Tools can also be used with in high-alloy materials
- ❑ Significant part cost reductions due to grooving instead of single-point turning

Vocational training pays off:

MARCO RAIS AND MARCO FORMELLA IN NEW POSITIONS!

Schwanog actively relies on continuous training of its employees in order to be prepared to meet new technological challenges and increasing complexity.

Numerous Schwanog employees have gained further qualifications, especially in the technical field, and thus also created the best prerequisites for a successful professional future for themselves.

Current examples are our employees Marco Rais and Marco Formella, both of whom have been with Schwanog for many years. We are very pleased that they will be able to support our team even more competently in the future with their successful qualifications as master craftsmen and technician.



Marco Formella

Marco Formella began his apprenticeship as a metal-cutting mechanic at Schwanog in 2010 and after successful completion, he worked as a tool grinder on 5-axis grinding machines for more than 5 years. He has now also completed his further training as a technician successfully and works in the process optimization since July 1, 2019.

Marco Rais

Marco Rais has worked as a tool grinder on Haas grinding machines for 7 years in Schwanog's grinding department. Following his successful training as master craftsman, Marco Rais has worked in the design department since July 1, 2019.

EMO and AME trade show review and WIMTS show outlook:

SCHWANOG EXHIBITING AT TRADE SHOWS - WORLDWIDE!



The EMO trade show in Hanover, Germany, Advanced Manufacturing Expo in Novi and Grand Rapids, Michigan, USA as well as the trade show WIMTS in Wisconsin, USA once again provided the ideal platform to introduce the professional audience to the latest product developments and current best practice examples.

Form drilling with Schwanog was an important focus in the applications area at all trade shows, with the introduction of solid carbide form drills which complements our line of insertable form drills. The visitors were impressed by the enormous unit cost reductions of the presented project examples and were enthusiastic about the possibilities that Schwanog offers with its high productivity multi tools. All trade shows



turned out to be a complete success for our company.

SCHWANOG

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