

**REDUCING COSTS  
IS OUR JOB!**

[www.schwanog.com](http://www.schwanog.com)

**Schwanog**



# OUR MISSION: GROOVING INSTEAD OF SINGLE-POINT TURNING!

You are a manufacturer of precision turned parts or drilled and milled components and want to reduce your part costs considerably? Then you have come to the right place! Our insertable form tools are the quickest and most efficient way to cost reductions: Grooving instead of single-point turning can lead to savings of up to 40%!

The basis for this is our system which always includes a Schwanog holder and a Schwanog insert blank. Part-specific contours are individually ground and wire-cut into this blank. Typical batch sizes for us range from 3 to 50 form tools per order.

Due to the increasing success of our insertable tooling systems in the US market, we founded Schwanog LLC in

2004 to better support our US customers. Located in Elgin, Illinois a northwestern suburb of Chicago, we provide customer service, technical sales / support, inventory and a contemporary production facility assuring quick response and fast delivery times. Our technical team with their extensive experience will guide you through the entire process from inquiry to delivery of your order providing a service that's second to none. Further support is offered through our application engineers which are currently installed in the states of IL, WI, IN, OH, NY, PA as well as Ontario, Canada. Expertise, top notch quality, efficiency and quick turnaround are prime factors for today's success.

**We guarantee to increase your productivity!**





**Holger Johannsen**, General Manager  
Schwanog LLC



**Clemens Güntert**, Managing Director  
Schwanog GmbH (Germany)



# INSERTABLE FORM TOOLS ARE OUR EXPERTISE!

We can offer you cost saving tooling solutions in twelve application areas which are always tailored to your part.

The Schwanog tooling systems, which always consist of a Schwanog tool holder and an insert blank, are the basis of all application solutions. Using state-of-the-art, robot-supported equipment, part-specific contours are ground or wire cut into the insert blank. Typical batch sizes for Schwanog are ranging from 3 to 50 form tools per order.

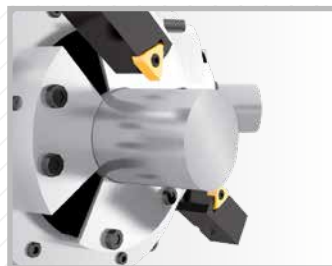
Our insertable form tools can be used on single and multi-spindle lathes, chuck and turret machines as well as CNC and swiss-type lathes.

Schwanog tooling solutions often lead to part cost reduction of up to 40% as well as providing maximum precision and highest surface finish quality.

In addition to the distinctive economic benefit there is another application advantage. Due to Schwanog system technology contours can be achieved which cannot be produced while using the single-point turning process. This represents a further and very significant advantage for precision parts used in the automobile and medical industry.



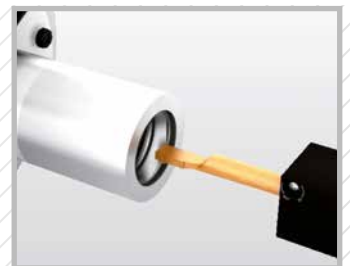
OD Grooving



OD Grooving on rotary transfer machines



ID Grooving



ID Grooving and turning



Polygon turning



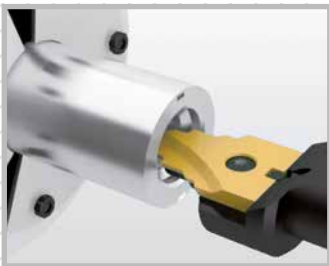
Broaching of Serration



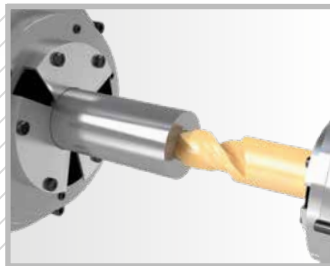
OD Whirling



ID Whirling



Form drilling



Solid Carbide drills



Shave tools



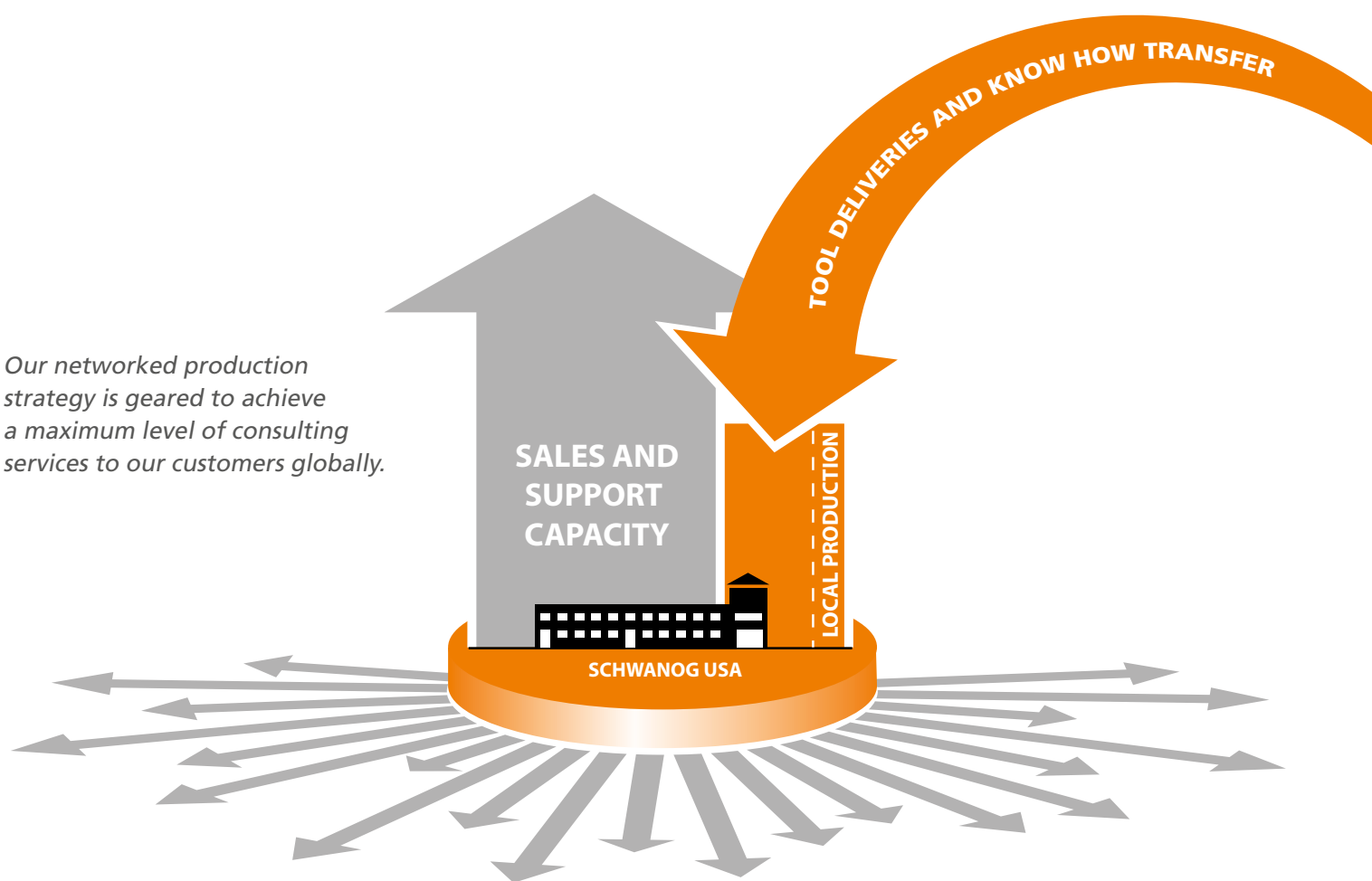
Skiving



Selector System

# WITH NETWORKED GLOBAL PRODUCTION STRATEGY.

*Our networked production strategy is geared to achieve a maximum level of consulting services to our customers globally.*



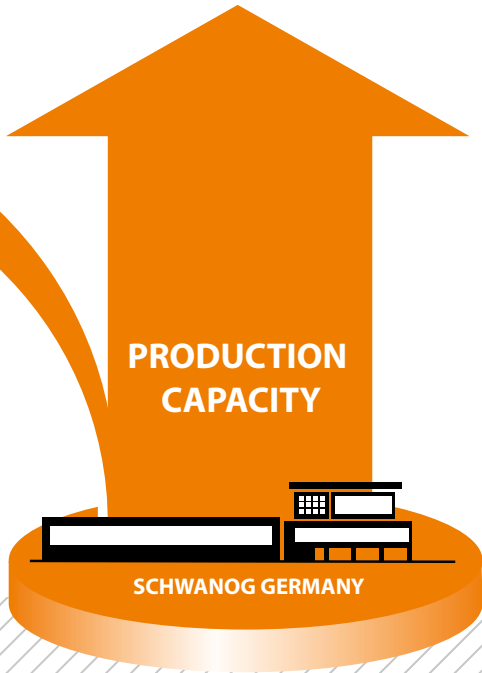
As an SME and expert manufacturer of customer-specific insertable form tools, our proficiency focuses clearly in the consultation of our customers. Whether personally on site or by phone through our technical in-house sales department.

That is why we are deliberately channeling our investments here in the USA location into the expansion of sales capacities and relying on a networked manufacturing strategy of strength in conjunction with Schwanog Germany.

In the USA, we have a compact, ultramodern production facility that allows us to flexibly absorb peak order volumes, and to quickly implement particularly urgent orders in-house.

At the globally central production site in Germany, our entire manufacturing know-how is consolidated. Production is being expanded continuously with high levels of investment in robot-assisted production cells and systems. This way we ensure a tremendously high level of productivity. This in turn, eases the burden on our US location, freeing up resources for the further expansion of our sales.





*Globally central  
production site*

## YOUR BENEFITS

- Manufacturing strategy of strength, consolidates the strength and resources required to increase consulting services in the USA.
- Local, ultramodern production facility in the USA location with grinding and wire cutting machining processes for the production of particularly urgent orders.
- Globally central production site in Germany, with highest levels of productivity, consolidated expertise and knowledge transfer





# MAXIMUM EFFICIENCY THROUGH HIGH-TECH MANUFACTURING

Through continuous investments in our manufacturing, we are in a position to act at the highest technological level due to the use of robotics. The efficiency of the processes here is crucial for the short order throughput times of the individually manufactured form tools.

Grinding, EDM wire-cutting and milling are the three primary processes that we use with the utmost precision in our manufacturing.





## GRINDING

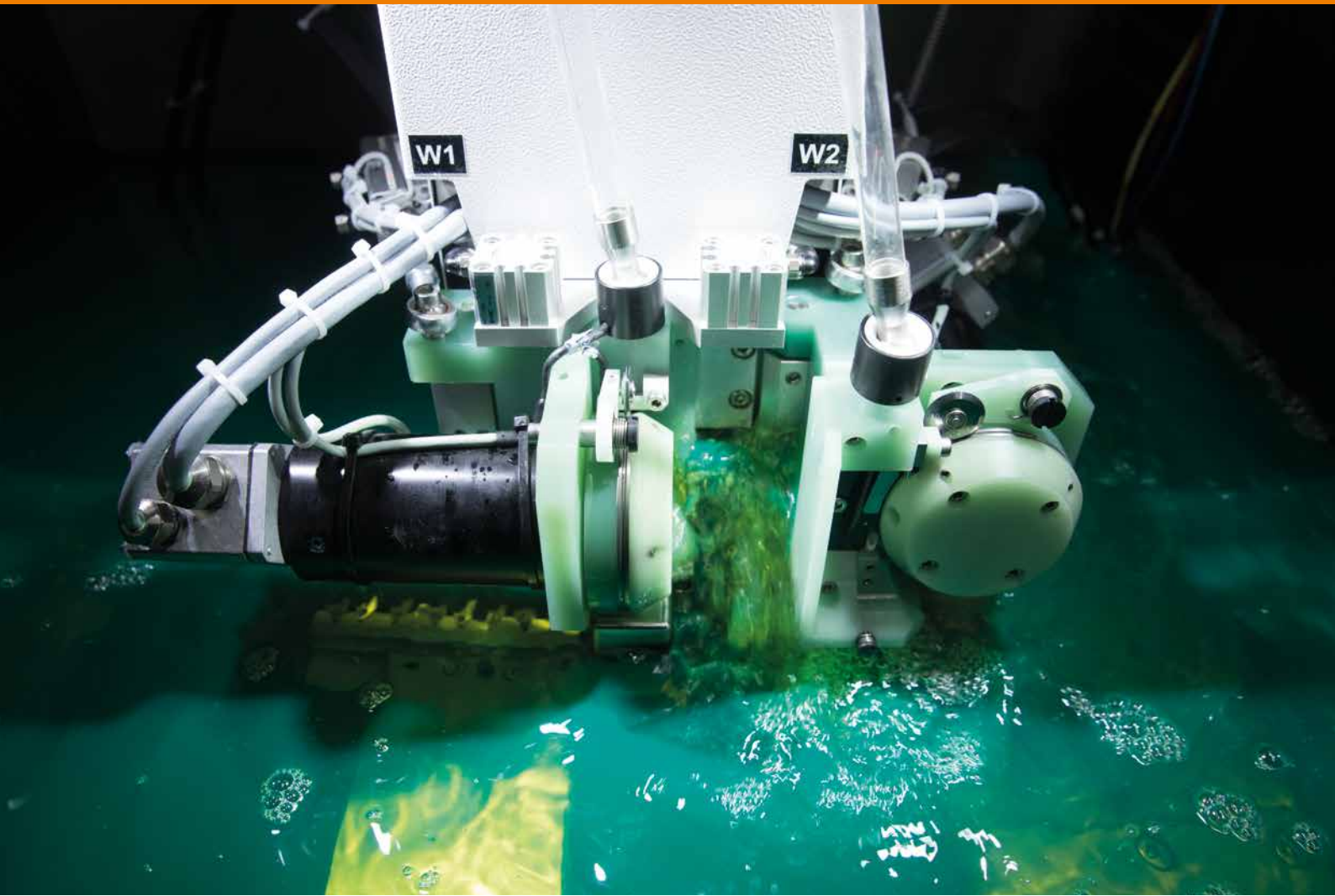
The grinding center with eighteen 5-axis CNC grinding machines, some equipped with robot support is the heart of Schwanog's manufacturing.

The robots are feeding the tool blanks into the grinding process and then retracting the finished form tools. This reduces throughput times considerably and leads to shorter delivery times of the individually manufactured tools.

The vast experience of our employees and the high technical standard of our equipment enable us to manufacture even the most complex contours at maximum precision and surface finish quality.

Due to the expansion of our production facilities we can adapt our capacities to the future growth without incurring any space problems.





## EDM WIRE-CUTTING

For highly complex contours we utilize the EDM wire-cut process which we have developed due to major investment to the highest possible technological level.

Only a few years ago, the technology with EDM machines and 3-axis loading stations was regarded as state-of-the-art technology. With our new technology we currently combine nine EDM machines in Germany in a single robot cell as a sealed system whereby a 6-axis robot loads and unloads fully automatically. Empty pallets are returned automatically to the loading station by the robot where they are loaded manually with insert blanks. The advantages are largely determined by the speed of loading and unloading of the inserts as well as the automation of these steps.

This allows us to manufacture around the clock, 24 hours a day, resulting in even quicker order turnaround times for our customer.

Additional capacity provided by our own EDM Wire-Cut Machines at the location in the USA.







## MILLING

Along with grinding and EDM wire cutting Schwanog has also invested in its own milling centers. All standard and special tool holders are manufactured on the latest 5-axis milling centers and 5-axis milling and turning centers.

This ensures that we have the necessary flexibility, particularly for special requirements and keeps the manufacturing know-how of grinding, wire-cutting and milling in-house.





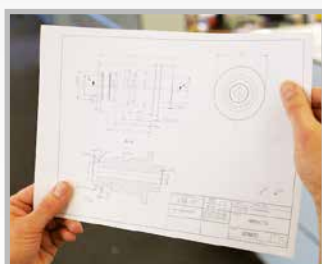
# OUR ORDER PROCESS: INDIVIDUAL SOLUTIONS WITH QUICK TURNAROUND TIMES!

## 1. INQUIRY

The way to cost savings and increased productivity leads through the consulting service of our sales division. Send us your inquiry, ideally with a part drawing, by web, email or fax.

# 1

### INQUIRY



## 2. QUOTATION

Our experienced technical sales team will develop based on your part drawing the best economically and technologically sound solution. Within a short period of time you will receive our manufacturing recommendation along with a quotation.

# 2

### QUOTATION



## 3. ORDERING

Forwarding of purchase order to Schwanogs sales department.

Upon receipt of purchase order follows the development of the tool drawing as the next process.

# 3

### ORDERING



#### 4. DESIGN

Upon receipt of purchase order we will design the best individual tooling solution for the manufacture of your part. A detailed tool drawing will be made available to you for your review.

#### 5. PRODUCTION

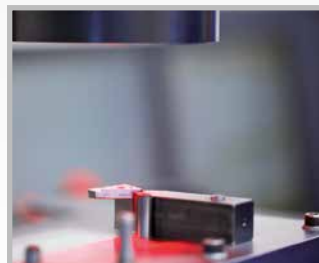
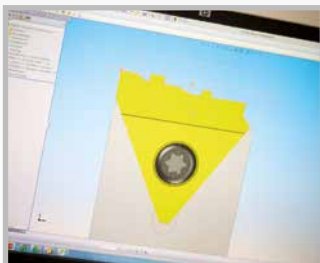
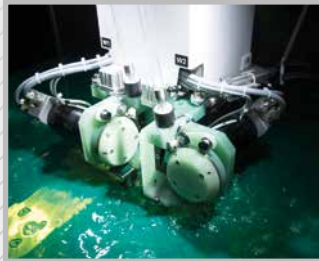
Depending on geometry and material specification the profiles are manufactured on ultra-modern 5-axis CNC grinding centers, fully automated AGIE EDM machines with robot technology and cell management or a combination of both processes.

#### 6. QUALITY CONTROL

Thorough quality control using CCD camera technology ensure the impressive precision of the contours. Our company is DIN ISO 9001:2008 certified and has a stringent quality assurance system.

#### 7. CUSTOMIZED FROM 3 PIECES UP

Due to efficient processes even small batches can be produced economically and quickly.





## **SALES AND DESIGN – AN UNBEATABLE TEAM!**

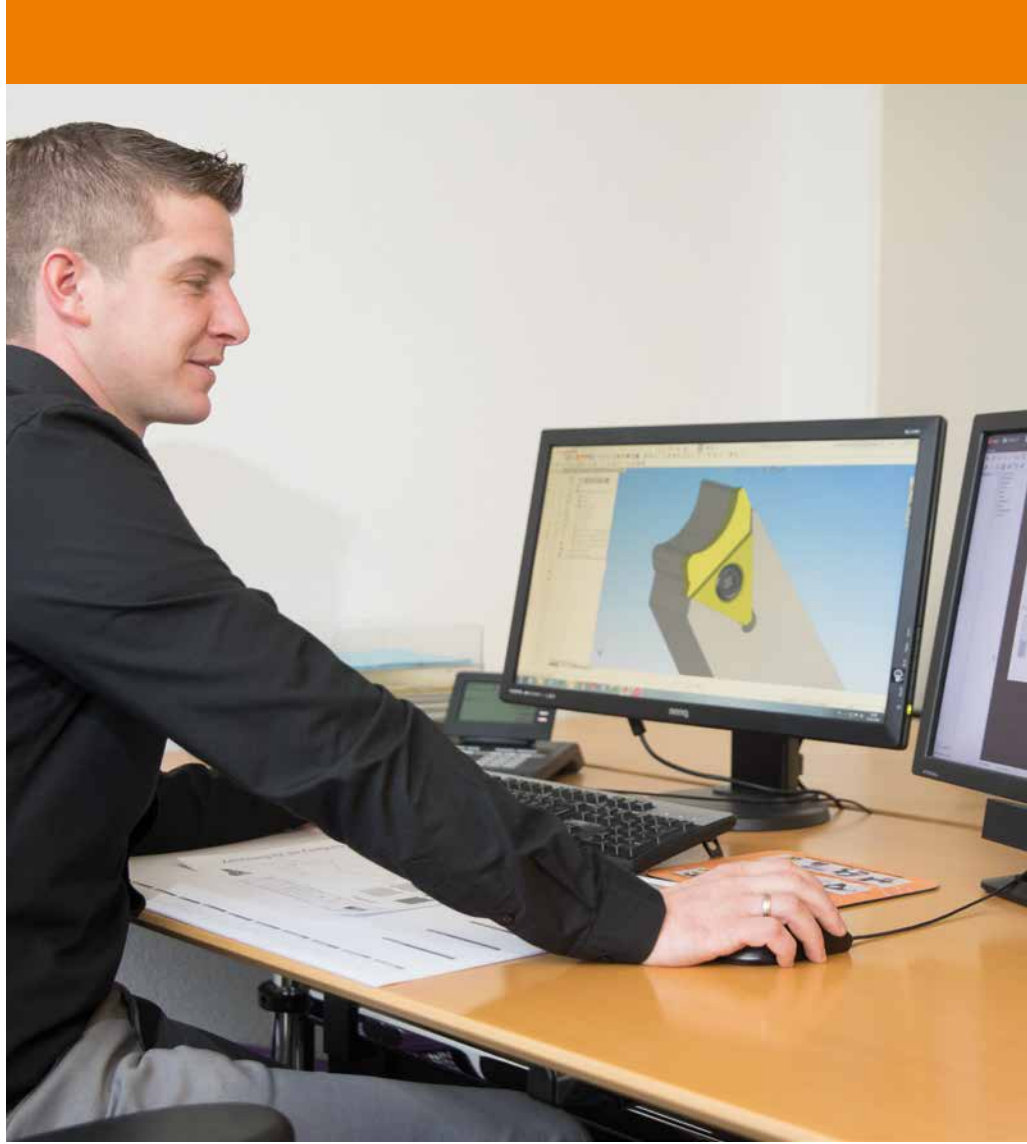
Like our customers who successfully manufacture with customized tooling solutions, one usually has little time to spare. As we are highly aware of this, we have closely linked our technical sales teams with the design department.

Our outside sales provides technical advice in person at your site to discuss your requirements. Our inside sales team is available via telephone to turn your requirements into efficient solutions, both quickly and reliably.

Once the recommended and quoted tooling solution has been ordered, our design department develops the manufacturing drawing for wire-cutting or grinding the defined contours in a short period of time.

The above procedure is highly efficient and ensures shortest order throughput times, from your inquiry to the delivery of the form tool.





## SALES:

- Experienced, capable inside and outside sales team
- Personal advice through our productivity specialists
- Fast analysis of your requirements with cost-saving manufacturing recommendation
- Close connection to engineering department

## DESIGN:

- Extremely capable design team with fast solution results
- State-of-the-art hard and software with 3D-Solidworks
- Drawing exchange with 3D simulation upon request





**Schwanog LLC**  
1301 Bowes Road, Suite A  
Elgin, IL 60123

Phone +1 847 289 1055  
Fax +1 847 289 1056  
www.schwanog.com  
info.usa@schwanog.com



**Schwanog Indexable Form Tools  
(Kunshan) Co. Ltd**  
German Industry Park II  
#329 Jujing Road  
215321 Kunshan, Jiangsu Province

Phone +86 0512 8788 0075  
www.schwanog.com  
info.china@schwanog.com



**Schwanog · Siegfried Güntert GmbH**  
SE-33376 Reftetele

Phone +46 734 472 100  
www.schwanog.com  
jonas.lund@schwanog.com



**Schwanog · Siegfried Güntert GmbH**  
**Headquarters**  
Niederschacher Str. 36  
D-78052 VS-Obereschach

Phone +49 77 21 9489 0  
Fax +49 77 21 9489 99  
www.schwanog.com  
info@schwanog.com



**Schwanog · Siegfried Güntert GmbH**  
CZ-76326 Pozlovice

Phone +420 604 577 616  
www.schwanog.com  
vladimir.hrib@schwanog.com



**UBR SRL**  
Viale Italia 95  
25064 Gussago (Brescia)

Phone +39 030 2520842  
Fax +39 030 2521481  
www.ubr.it · ubr@ubr.it



**Schwanog France**  
ZAC des Léchères · 65 Clos de l'Ouche  
F-74460 Marnaz

Phone +33 450 18 65 16  
Fax +33 450 18 47 75  
www.schwanog.com  
info.france@schwanog.com



**Schwanog · Siegfried Güntert GmbH**  
PL-05-410 Józefów

Phone +48 606 177 025  
www.schwanog.com  
lukasz.kucinski@schwanog.com