

## Axial thread rolling on CNC lathe – the premium class



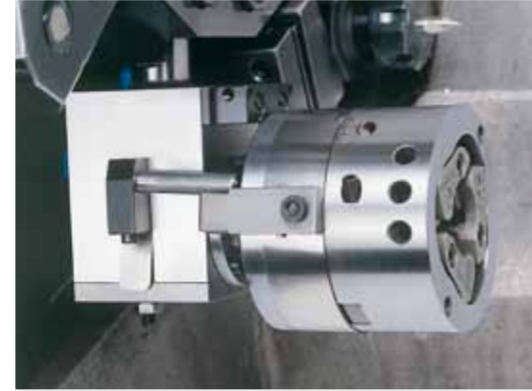
The advantages of thread rolling compared to the conventional thread-producing method are obvious: there is no notch effect in the load-bearing core cross-section; fatigue strength and surface hardness of the thread flanks are higher. The result are press-polished, wear-resistant and corrosion-resistant thread flanks.

Thread rolling is a rational and economical method of manufacture. As only one process is required compared to thread chasing, this type of manufacture helps to save time and money. Compared to the multiple thread chasing processes, tools can be produced 10 to 15 seconds quicker by thread rolling.

What is more, the process is very simple: In closed condition, the rolling head moves to the precisely set, rotating tool at a constant feed. When the thread length has been reached, the rolling head opens automatically and can move back in rapid motion after that. In order to close the head, the guide ring has to be radially turned by means of the locking lever. Time-consuming programming and additional closing times reduce the time advantage gained by thread rolling, however.

A closing process of the premium class is now offered by WAGNER® using an integrated NC locking device for all axial rolling heads RS10 to RS27/56. The NC locking device is taken up by means of the integrated VDI shaft in the tool turret, making sure that the rolling head receives the necessary radial movement from the locking lever. In the process the rolling head and the locking device are on one station. Additional programming is not required. The closing pulse is provided prior to thread rolling very easily during a normal rotating or drilling operation. For this purpose, cooling water is taken from a rigid tool holder during the working process which is fed to the locking device. As soon as the rolling head is started in the working process, there is no loss in time rolling.

**Thus, the economic benefit of thread rolling is retained!**



### NC locking device - your benefit:

- Integrated closing equipment without occupying another tool station
- Time neutral: No additional time spent for the closing operation
- Changes or adaptations on the turning machine are not required; additional costs are not caused

## Content

**User report:**  
Thread Rolling Attachment for knurling page 1

**Product line expanded**  
We will show you what the "new ones" can do.

**The sales team presents itself:**  
View of all sales staff. page 3

**NC locking device for axial rolling heads:**  
Automatic and practical.

**New web page:**  
We are showing you the best features at [www.wagner-werkzeug.de](http://www.wagner-werkzeug.de)

**From the history books:**  
Gustav Wagner page 4



## Tangential Thread-Rolling Attachment Successful In Continuous Operation

Full process safety when using the tangential method for knurling

*HN Metallverarbeitung has found the "right" tool for itself in the tangentially operating thread-rolling attachment supplied by WAGNER® Werkzeugsysteme Müller GmbH, which fulfils the required process safety in particular. Moreover the solution provided by WAGNER® offers to the contract manufacturer also a distinctly improved quality of the knurls in case of long roller operating time as well as a significant time and financial savings potential.*

WAGNER® Werkzeugsysteme is successful in the market with its product portfolio. This is underlined by the good co-operation with several machine manufacturers, when it comes to external cylindrical processing of turned parts, such as the metal forming and metal removing thread processing or special cases of application also, such as knurling, flattening, rolling of profiles or simply the fast and precise diameter reduction by means of multi-point rotating cutting heads. With respect to these applications WAGNER® is the first contact who can offer the suitable solution in (almost) all cases. "The machine manufacturers appreciate our competence, our know-how as well as our quick support and service. For them in particular – as well as for our other customers – it is a big benefit that our technical field staff are so deeply involved in the matter and are so well trained that apart from technical consultation in sales talks they can also put the machines into operation and can carry out training sessions and instructions. One contact for everything from A to Z that is our forte," says Mario Giacobbe, Sales Manager at WAGNER® Werkzeugsysteme.

The knowledge and the experience of WAGNER® Werkzeugsysteme have been appreciated by HN-Metallbearbeitung contract manufacturer. About a year ago, the Westphalian company bought a Gildemeister Twin 65, a double-spindle machine. Due to the high investment in the machine, HN decided in favour of the inexpensive variant of the tools offered first of all, i.e. the conventional knurling tool. The consequence, however, was that difficulties cropped up with respect to process safety and thus high reject rates. Problems occurred with the quality of the knurls themselves as well as with process safety of knurling. Again and again knurls occurred which were flushed, which means that the knurls were not formed, but just "jumped across". It took quite some time until the contract manufacturer was in a position to make the process work at all. In the end, however, the system was not process-safe at all.

"For this reason we have decided to test the other tool of WAGNER® Werkzeugsysteme Müller GmbH provided in the offer of Gildemeister. After contact to the supplier, everything worked very smoothly: Only two weeks later, the sales person of WAGNER® Werkzeugsysteme dealing with our area, Mr Armbruster, used a test tool to run the machine. The test installation of the tool followed for one month, during which the process safety and the operating life was checked, in particular. We recognised quickly that everything was working like a charm", says Michael Nitsch, member of the Management at HN-Metallbearbeitung. Subsequently the tool was ordered at WAGNER® whilst the installed test tool was used up to delivery, thus permitting production. This procedure reflects the philosophy of WAGNER® Werk-

## Internet appearance has had a face-lift

The Internet is the medium, with which our most important target groups make contact most frequently to WAGNER® and/or obtain information about their products. Far more than 17,000 visitors with just under 77,000 pages called up in 2011 demonstrate the necessity of keeping the WAGNER® website at current standard of the Internet. Since 1<sup>st</sup> September 2012, the new website has been online, the content of which has not only been updated and the images have not only been modernised, but there are many new useful features. For example, by means of the Tool Selector you can choose the suitable tool from our range. The system supplies all possible tools as well as all suitable holders for your choice. Please come on a virtual trip through the new WAGNER® website.

- A modern appearance for an innovative company:
- Contemporary design
  - Regular update of the entire content
  - Compact information easy to find
  - Direct links to all companies of the Müller Group from every sub-page



## From the history books: Gustav Wagner

In 1888, in a small room in the back of a house in Metzzingen, Gustav Wagner started the production of the machines he designed himself. No two years later, he received his first patent already for his centering and milling machine. In 1902, he developed the thread cutting head as a further development of the centering head, which is hard to imagine the production of external threads without up to this very day.

*The WAGNER® representative from the German Ruhr area, Mr Wiese, had a fondness for quick, smart vehicles and had always driven a BMW. At the beginning of the 1960s, together with an assembly foreman stationed at WAGNER® in Düsseldorf he visited a customer in the German Sauerland region in order to demonstrate a thread cutting head. After some hours they managed to finalise the sale and the customer, the proprietor of a small Sauerland company, accompanied the gentlemen to the door.*

*When he saw the BMW V8 on the road, he sighed: „Now I know why WAGNER® is so expensive! A distinguished representative along with a sly assembly foreman come to see us, have three hours time for such a head and then on top they drive such a smart BMW!“*



from: „Wurzeln, Kraft für den Fortschritt („Roots, Power for Progress...“) - Chronicle of Gustav Wagner Maschinenfabrik“, 1990.



### IMPRINT

Werkzeugsysteme Müller GmbH  
Gutenbergstraße 4/1  
72124 Pliezhausen

phone +49 7127/973-300  
fax +49 7127/973-390

mail [info@wagner-werkzeug.de](mailto:info@wagner-werkzeug.de)  
web [www.wagner-werkzeug.de](http://www.wagner-werkzeug.de)

## Fair Dates

BIMU  
2<sup>nd</sup> - 6<sup>th</sup> october 2012  
Milano | Italy

VIENNA-TEC  
9<sup>th</sup> - 12<sup>th</sup> october 2012  
Vienna | Austria

SIANE  
23<sup>rd</sup> - 25<sup>th</sup> october 2012  
Toulouse | France

JIMTOF  
1<sup>st</sup> - 6<sup>th</sup> november 2012  
Tokyo | Japan

MIDEST  
6<sup>th</sup> - 9<sup>th</sup> november 2012  
Paris | Frankreich

PRODEX  
20<sup>th</sup> - 23<sup>rd</sup> november 2012  
Basel | Schweiz

We are looking forward to meeting you!

„One contact for everything from A to Z  
that is our forte!“



► Fig.: HN-Metallbearbeitung also uses axially driven tools from WAGNER®, which are used for milling component parts.



continued from page 1

zeugsysteme – helping quickly and in an uncomplicated manner. After all, if specialists are convinced that they are offering a productive solution, they are willing at any time to render it available free of charge. In this respect, familiarisation on site, the initial operation as well as the training is carried out – cost neutral, first of all, in order to prove that the criteria defined and the requirement with respect to cutting parameters, operating time and work piece quality are fulfilled. Thus, the customer, like HN in this case, plays it safe because he does not have to purchase the tool first to check subsequently whether it is operational.

HN-Metallbearbeitung has been using the WAGNER® tangential thread-rolling attachment B15 K on the Gildemeister machine in the production department since February 2011 – and this on one turned part only: This part is a forged part with an eccentric knurl RGE 1.0 made of high-strength stainless steel with a weight of about 600 g and a length of about 135 mm. This component part

needs about 5 to 6 minutes to be produced. As the machine operates for 24 hours in three shifts on five days a week, about 250 parts are produced every day. The tolerance of the knurl is in the range 1 tenth. For the quality, however, it is decisive that the number of teeth of the knurl is maintained as well as the full shape of the teeth.

Apart from process safety, daily practice quickly reveals further significant advantages of the tangential thread-rolling attachment from WAGNER®: There is the operating time for example, i.e. how many parts can be processed with one set of rollers which have to be replaced when they are worn. This is several times more than what WAGNER® predicted even. This "false estimation" is due to the high-tensile steel as well as due to the application which is new to WAGNER® as well. Whereas HN was able to place about 500 knurls only before the knurls had to be replaced in the first tool which caused the problems with process safety, the Westphalians carried out more than 14,000 processes already

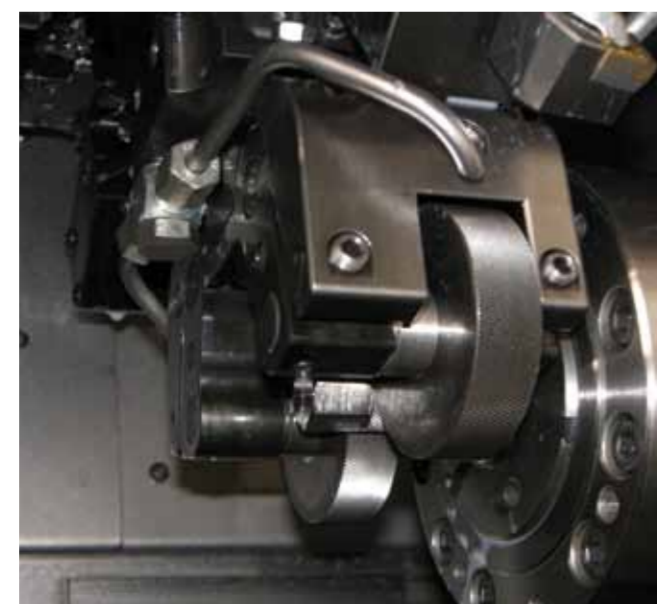
with a set of rollers in the tool provided by WAGNER®. Four to five thousand knurls had been promised – which is about ten times of what the previous tool had done and which had been the target of the contract manufacturer.

Michael Nitsch addressed yet another advantage: "The total processing time of the component part is distinctly lower because we are about 20 per cent faster with the WAGNER® tool. Compared to the conventional knurling tool we used for the knurling process at first, it is even more - about 70 per cent: Previously the process took about 1 to 1.5 minutes, but now we are down to 20 seconds only." This is the reason why in the meantime the tool from WAGNER® only is used to process the high-tensile component part. The stated objective of HN to ensure process safety which was not possible with the standard knurling tool could be achieved without any problems as well. In addition, the Westphalians are highly satisfied with the service provided by WAGNER®: "Their" out-of-office staff member gives them his advice and support. If and when there is a question, there is quick and competent help.

"Apart from the impressive time aspect there is also an enormous financial potential for savings by using WAGNER® tangential thread-rolling attachments: At first, the costs for each processed unit was several Euros, but now it is only a few cents – this is about a hundred times less. The precise result can be calculated only when the end of the operating time has come for the current set of rollers, but there is no doubt about the tool being paid off fast", emphasised Michael Nitsch. No question – on account of the positive experience, HN-Metallbearbeitung will continue to fall back on the tools provided by WAGNER®. ♦



The component part is an eccentric turned part made of high-tensile stainless steel.



The WAGNER® Thread Rolling Attachment B15 K mounted on a Gildemeister machine

## The Müller group

The Müller Group is comprised of four independent companies who work in conjunction with one another and pool their skills in order to be able to offer our customers throughout the world better products and services within the shortest time and under the best possible conditions.

**HOFMANN Mess- und Teiltechnik Müller GmbH**, whose core expertise is focused on the indexing heads and rotary tables sector, is the newest member of the Group, which also counts **WAGNER® Werkzeugsysteme Müller GmbH**, who specialise in the production of thread milling equipment in their own turning shop, as another member of the same Group. A subsidiary company, **Alphatool AG**, near Zurich, is the trading company that sells all of the products throughout central and southern Europe. The third company in the Group is **AlphaFluid Hydrauliksysteme Müller GmbH**, who develops fluid technology solutions for the construction machinery, agricultural and power engineering as well as general machinery industries. **Alpha Turn GmbH**, who is the fourth member of the Group, develops gripper rotators.



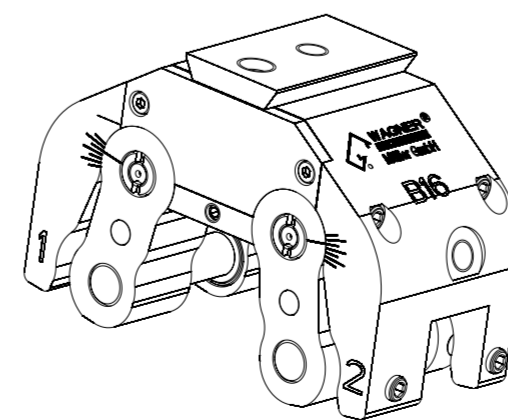
## Product line expanded

All WAGNER® thread rolling attachments are suited for the chip-free shaping technology of threads behind or close to a collar or very short threads. It is also possible to roll threads with very short run-out or threads where the end of the workpiece is not free.

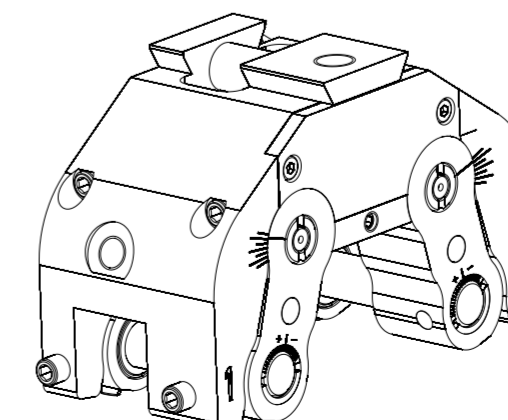
Last year, the existing type series of WAGNER® thread rolling attachments has been enlarged by three new models. Because of their large thread roll diameters, they are especially suitable for operations close to and behind great diameters.

The types B14, B16 and B19 differ from the former thread rolling attachments in size and the types of threads they can produce. The main feature is yet the availability of numerous variants for special customer needs. The B16 thread rolling attachment, for instance, is available in 15 versions, i.e. -F, -K, -AS, -V or -NA.

The best rolling results in fine-pitch threads are achieved by the use of our tool variant "-F". In case of threads with a very small pitch it is important to keep the axial play of the thread rolls as low as possible. By means of the patented WAGNER® axial play fine adjustment, the axial roll play can be minimised in 0.02 mm steps. The fine adjustment is available optionally for type B14, B16, B19 and can be upgraded by exchanging the gearing arms.



B16 in standard design



B16 FK in compact design for fine threads

## The sales team presents itself

Our sales force has been enlarged and restructured in the last few years. Below, you will find your individual contact person at a glance:



**Mario Giacobbe**  
Sales Director



**Thomas Armbruster**  
Northern & Eastern Germany



**Guido Krause**  
Southern Germany



**Karl-Heinz Wilhelm**  
Western Germany



**André Moradian**  
Eastern Europe, China



**Werner Goller**  
Service and Commissioning

Questions concerning your order or a quotation can be addressed to the following contact details:

phone: +49 7127/973-331  
fax: +49 7127/973-390  
mail: [vertrieb@wagner-werkzeug.de](mailto:vertrieb@wagner-werkzeug.de)