DECO MAGAZINE 27

4/03
DECEMBER
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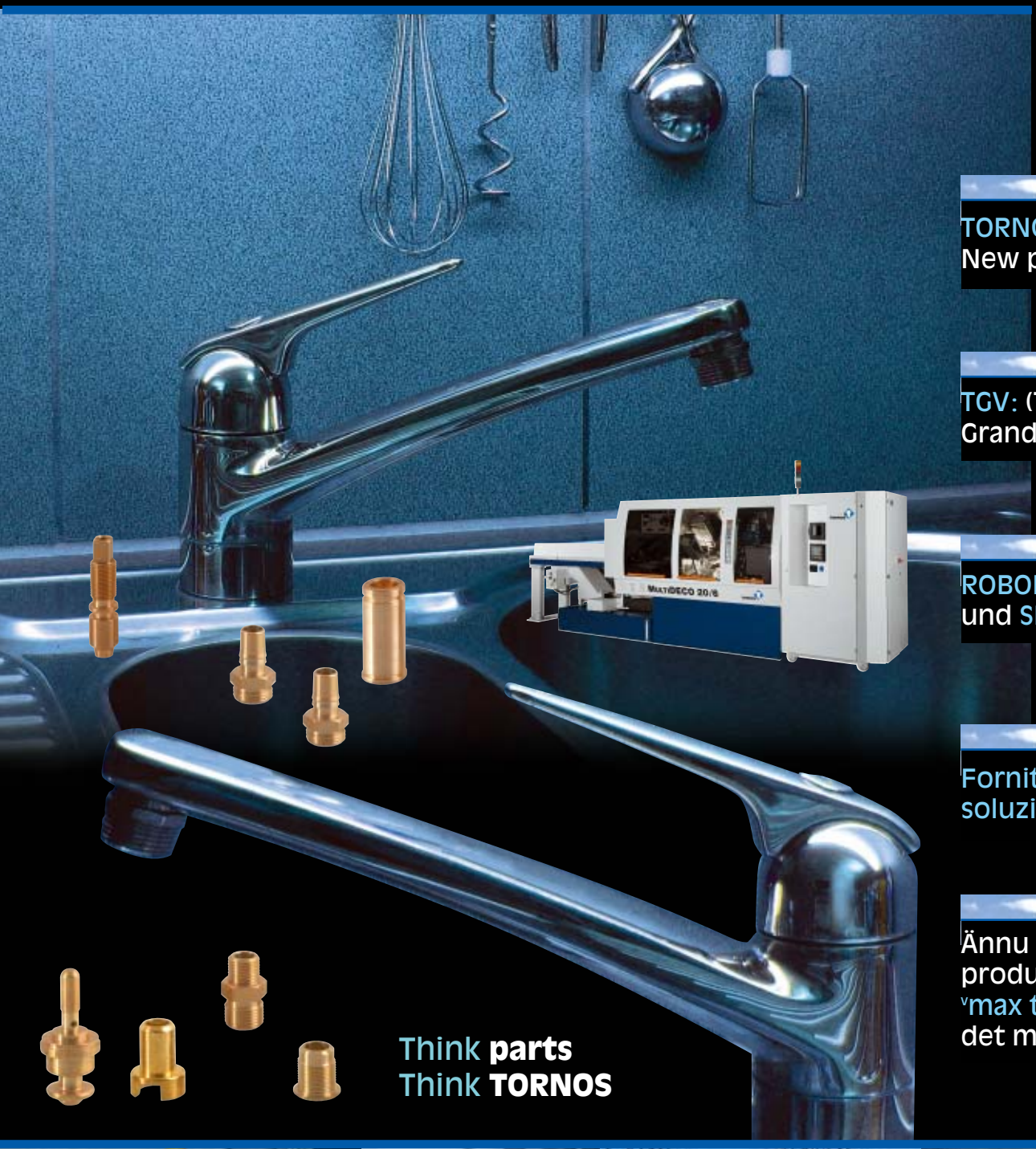

TORNOS medical:
New possibilities!

TGV: (Travail à Grande Vitesse)

ROBOBAR SBF-216 und SBF-532

Fornitore di soluzioni...

Ännu snabbare produktion:
vmax teknologi gör det möjligt

English

Tailor-made Parting-off Solutions for the TORNOS DECO. 4
High speed Working. 6
TORNOS medical: New possibilities! 10
Additional bar feeders for DECO single spindle lathes, ROBOBAR SBF-216 and SBF-532. 12
Solutions supplier… 15
EMO 2003: Encouraging signs… and a winning strategy! 18
CLEANMIST S.r.l. designed, produced and patented an innovative centrifuge filter. 20
October 2003: an important milestone for European Quality. 22
Even faster production: ᵛmax technology makes it possible 24

Français

Editorial 27
TGV: (Travail à Grande Vitesse) 28
Fournisseur de solutions… 31
TORNOS médical: nouvelles possibilités! 34
Ravitailleurs additionnels pour tours monobroches DECO, ROBOBAR SBF-216 et SBF-532. 36
EMO 2003: Des signes encourageants… et une stratégie gagnante! 38
La Société CLEANMIST Sàrl a conçu, réalisé et breveté un filtre centrifuge innovateur. 40
Octobre 2003: une étape importante pour la qualité européenne. 42
Produire encore plus vite: c'est possible avec la ᵛmax-Technology. 44

Deutsch

"Wir sind gut in Deutschland sehr gut sogar" 47
Produktivitätssteigerung 48
Lösungsanbieter… 51
Medical TORNOS: Neue Möglichkeiten! 54
Neue Stangenlader für DECO Einspindel-Drehautomaten, ROBOBAR SBF-216 und SBF-532. 56
EMO 2003: Zeichen, die Mut machen… und eine Erfolg versprechende Strategie… 58
Das Unternehmen CLEANMIST GmbH hat eine innovative Filterzentrifuge entwickelt, realisiert und patentieren lassen. 60
Oktober 2003: Ein wichtiger Meilenstein für die europäische Qualität. 62
Noch schneller fertigen: Die ᵛmax-Technology macht's möglich. 64

Italiano

Editoriale 67
LGV: (Lavoro a Grande Velocità) 68
Fornitore di soluzioni... 71
TORNOS medicale: Nuove possibilità! 74
Caricatori addizionali per torni monomandrini DECO, ROBOBAR SBF-216 e SBF-532. 76
EMO 2003: Segnali incoraggianti… e una strategia vincente... 78
La CLEANMIST S.r.l. ha progettato, realizzato e brevettato un filtro centrifugo innovativo. 80
Ottobre 2003: un'importante pietra miliare per la Qualità Europea. 82
Produzione ancora più veloce: Con la ᵛmax-Technology si può. 84

Think **parts**
Think **TORNOS**

IMPRESSUM
DECO-MAGAZINE 27 3/03
Circulation: 12000 copies

Industrial magazine dedicated to turned parts:

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Roos SA, CH-2746 Crémines
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DECO-MAG is available in two versions:
- English / French / German / Italian
- English / French / German / Swedish

Tailor-made Parting-off Solutions for the TORNOS DECO

The DECO solution widespread in the UK not only helps customer to win. It also authorizes innovative companies to make business.

To illustrate this 'win-win' strategy, John Stretton from TTUK tell us more about a company called JJ Churchill.

JJ Churchill Limited is a family-owned precision engineering company based in the UK, and currently employing 150 people. Having designed and manufactured dedicated part-off tool holders for over 30 years they have solutions based on experience and innovation, and are leaders in this specialized field.

The JJ Churchill approach to part-off tool holders is "one size doesn't fit all". When you're deciding the ideal part-off solution for your TORNOS machine, a tool holder designed specifically for your model offers substantial benefits over other, generic holders

- Enhanced cutting rigidity
- Reduced material waste
- Maximized machine envelope
- Easier and more accurate of setting and pre-setting
- Rapid tool inter-changeability

Uniquely, JJ Churchill holders not only fit the configuration of the machine but any specific customer design requirement can also be accommodated. Should you need to part-off next to the main- or to sub-spindle, rotating clockwise or counter-clockwise, they will supply an ideal solution to suit your requirements. Once you've fitted the JJ Churchill parting-off system to your TORNOS machine you will never need to buy another part-off insert holder again.

Having manufactured numerous part-off tool holders for TORNOS machines over many years, their range now includes holders for the entire DECO 2000 family of machines.

Many DECO users in the UK are realizing the major benefits associated with the JJ Churchill parting-off system:

Hervé Engineering Limited

A long-established precision turned parts company based in Essex, chose to converted their TORNOS DECO machines along with their fixed-head CNC lathes to the JJ Churchill parting off system.

Their production manager, Ernie Mulryne said: "We have around-the-clock production and pride ourselves in responding quickly to our customers' needs; therefore machine down-time must be kept to an absolute minimum.

On any bar-fed lathe the part-off tool is likely to be the most vulnerable and with all other part-off tooling we'd tried, if an insert failed, the holder would probably be damaged or destroyed.

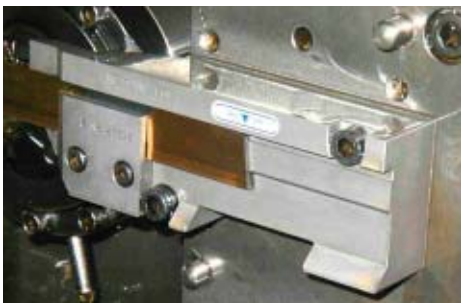
This not only proved to be costly in replacing holders but also increased the down-time.

With the JJ Churchill system fitted, the holder never needs replacing and we found the TwinTip blade D1730N in grade XPN an excellent choice when machining stainless steel.

Because of a particular design feature of the components we were machining on our DECOs it was an advantage to have an increased "Z" axis value on the part-off holder.

This was discussed, a new design created and the holders manufactured to meet this criteria."

A.C.P. Engineering Limited



Based in Lancing, West Sussex are one of the area's major manufacturers of repetition turned parts, supplying a wide customer base.

Tony Bullen, Director of A.C.P., chose to install the JJ Churchill parting-off system on his 6 DECO machines. Tony commented: "We have 3 DECO 20mm, 1 DECO 13mm and 2 DECO 10mm machines cutting mainly 313 / 316 grade stainless steel and titanium.

Parting-off inserts and holders consumed a considerable amount of our overall tooling spend.

Because we have equipment in-house to grind our own tooling I chose to equip all my DECO's with the relevant JJ Churchill holders but using their solid carbide re-

grindable blades. I've found the number of re-grinds achieved from a single blade makes this, for us, the most cost-effective method of parting-off which has resulted in significant savings – more than justifying the initial cost of the new holders.

North East Assemblies Limited

In only five years N.E.A. have become the area's largest sub-contract suppliers of precision turned parts, servicing numerous industries.

John Smith, the Managing Director, said: "Our growth has been both fairly rapid and on-going, the success been achieved by giving our customers exactly what they want, when they want it and at a competitive price.

I have 5 DECOs ranging from 13 mm to 32 mm bar capacity.

After choosing what I considered to be the finest machines, I needed to optimise their performance by choosing the best tooling.

With the part-off being a critical tool in a sliding headstock machine's set-up, I looked at what the market had to offer and eventually chose the part-off system by JJ Churchill for all my DECO machines.

All my machine setters and operators like the system: they find it easy to use and say it offers greater rigidity when machining some of the more difficult materials.

Using the competitively priced TwinTip blades and eliminating the expense of replacing damaged and broken tool holders this system, is indeed very cost effective. Furthermore they are willing and able to discuss individual tool holder requirements and design and manufacture a solution specific to your needs, all this within a relatively short timeframe"

Should you need any further details about JJ. Churchill or the DECO solutions, don't hesitate to contact the above-mentioned addresses.

John Stretton
General Manager
TORNOS TECHNOLOGIE UK

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High speed working

This edition of DECO-Magazine will provide you with some tips for the MULTIDECO machines.

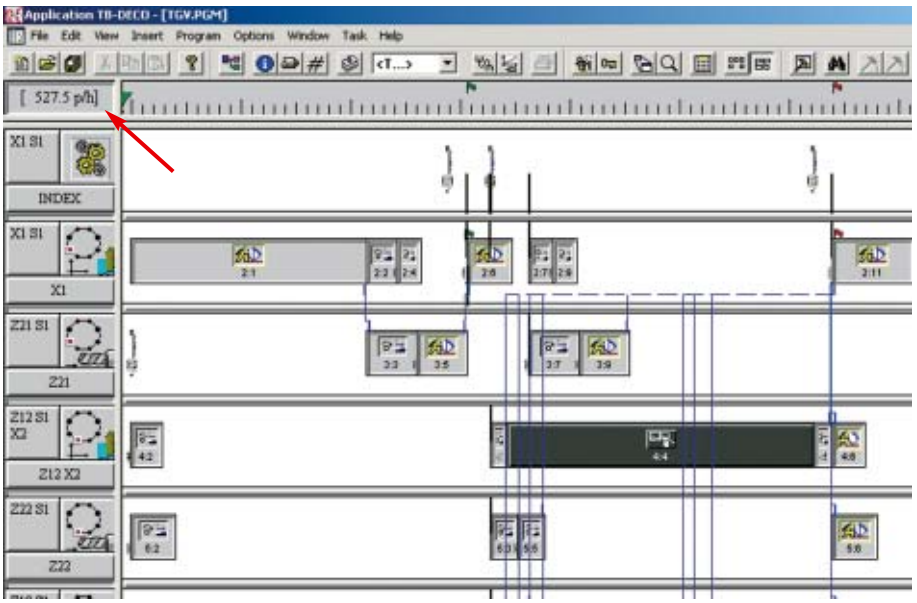
Manufacturers are facing constant pressure on their production costs. However, solutions can be found thanks to the exceptional versatility and productivity of MULTIDECO machines. The TORNOS specialists, who are constantly striving towards improvement, are hoping to involve their end-users in looking into ways of improving their output, by getting them to discuss their experiences.

This edition deals with:
Synchronisation shift and delay time management.

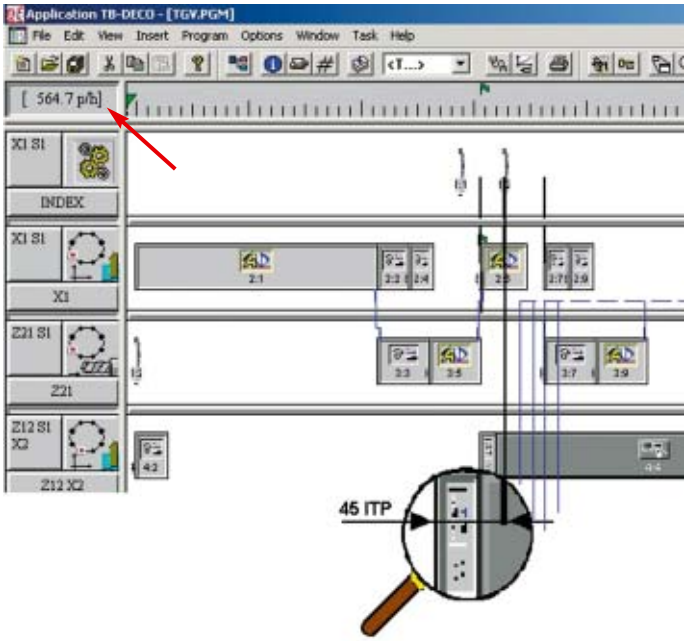
Synchronisation shift

Synchronisation is essential to operate DECO and MULTIDECO programs. Against a black outline in the program windows, it supplies a link between 2 operations. Depending on what is required, one can anticipate or delay (shift) the start or finish of an operation in relation to another. The main effect is a millimetric adjustment, thereby enabling, amongst other things, tools feed in masked time.

The most simple and interesting use is achieved along the longest operating line, at the time of tool feed and following barrel indexing.



The picture above shows is an example of the high-speed program. A production rate of 527.5 parts per hour is achieved with a program lasting 5.1 seconds. An actual output of 80 % is used when working out production time. (This 80 % output is good and currently used for small parts turning. It can change, depending on operation, material and tooling).

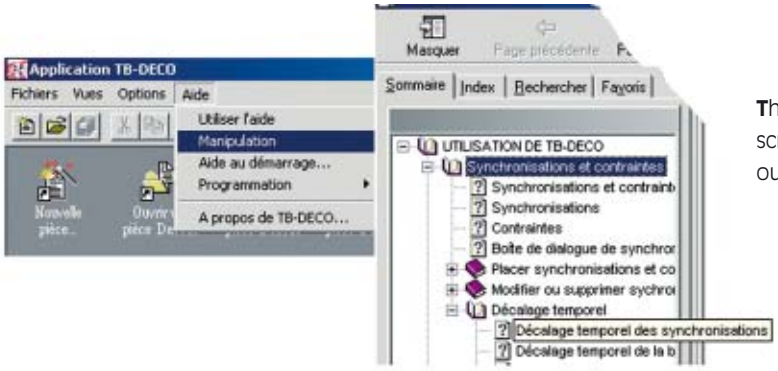


With the synchro shift, we anticipated 45 itp with operation 4.3 synchronised in the Z12 X2 operation line.

The result obtained is shown, to the above left of the two views.

Production increased from 527.5 parts per hour to 564.7 parts per hour.

7 % increase in production – achieved without even increasing the feed or cutting rates!



The TB-DECO help heading describes the controls for carrying out a **synchronisation time shift.**

Conditions of use

A synchronisation time shift following indexing, for example, is a valuable tool to achieve output. It must be used with care and without restraint. **Follow the recommendations below:**

- Account must be taken of the overall space requirements of the tools in question.
- Because of the position on the machine (e.g. position 1, 2, 3, etc..), the retraction value for indexing is fairly high. Those positions showing the greatest degree of retraction of axis X, show the worst positions.
- It is advisable to maintain a safety margin when the tools approach, so as to prevent any damage.

Tips:

1. In some cases envisage tool release along the plane of axis Z as opposed to axis X.
2. When proceeding with a synchronisation shift following indexing, one often starts by entering a value in the order of 15 itp. If successful, continue with searching for an increase in capacity by successively adding 3-4 itp.
3. Do not forget that the increase will be expressed as m/s or in parts per min. by the program. **This increase must be confirmed within one or more days.**

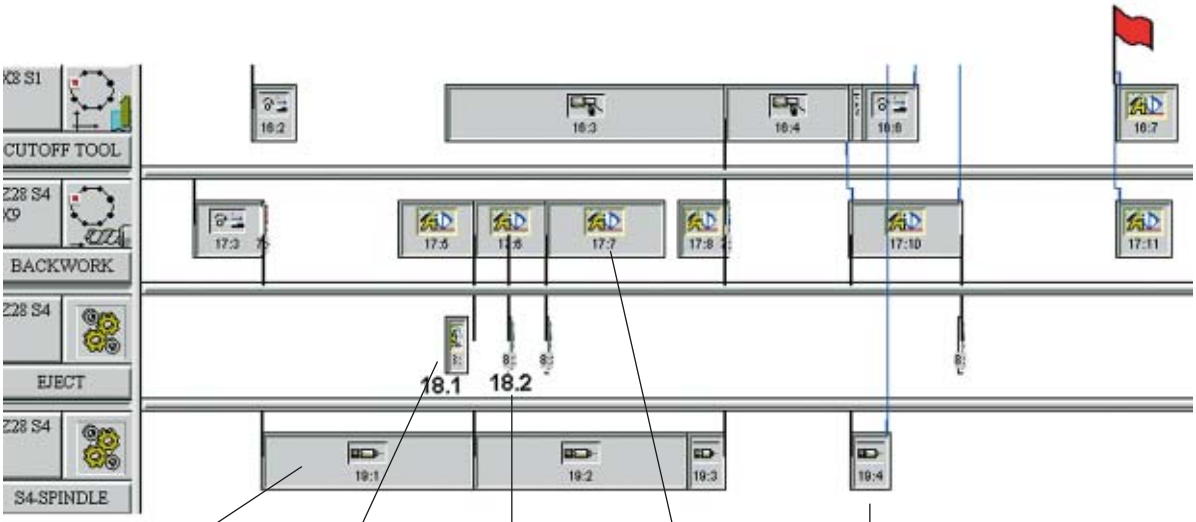
High speed working

Delay time management

Using the same logic, don't lose sight of any parts that may be lost in the chips because of a poorly managed recovery system ! That could reach up to 4%!

It should be pointed out that the "TB-DECO model" used as a basis for executing our programs is designed to work in cycle times of less than 4 seconds. This pre-supposes a very tight control of the time earmarked for each function of the cutting position.

For those numerous programs with considerably longer cycle times, where position 6 or 8 is not overworked, it may be possible to enter even longer delay times coupled with a slower bucket return travel time.



M405

G4 X1 (do not forget that a delay time of 1 second is only used to brake from 8,000 to 0 rpm. For slower speeds, count 0.1 sec per 1000 rpm.

M160
G4 X0.1 ***(X0.2)***
(X0.3 maxi)
M111

(G4 X0.2)
M161

Same delay times in these two operations!

(G4 X0.2)
G1 Z28=#2013 G100

The speed of the counter spindle can be increased, as opposed to the stopping speed. (Do not forget to enter an identical value for S4 in 'Spindle Manager').

In Italics, the delay times that can be amended or added to.

Tips:

1. Enter the smallest successive values whilst taking note of the effects.
2. Those parts not lost, will increase the rate of production. **This increase must be confirmed in 1 or more days.**

TORNOS medical

New possibilities!

As the world leader in the medical and dental sector, TORNOS developed a new machining process, which now makes it possible to execute inclined dental implants on the DECO 13a without having to rework the parts.

The trends in the medical and dental sector, coupled with the vast range of customer requirements, helped TORNOS become hugely successful with its DECO single-spindle lathes. The solutions offered by the company well match market expectations. Instead of resting on its laurels, the company is conducting on-going research into developing new machining facilities.

To get some more information, DECO-Magazine met Mr. Philippe Charles, product manager of the Business unit.

Philippe Charles

In order to achieve high-performance machining of the highly complex forms of curved implants, the TB-DECO development team is offering specific macros to help determine the various tool paths from the moment 3 axes are simultaneously interpolated.

Numerous software solutions, in particular the CAO VRML drawing program, mean that we can accurately control the shapes undergoing machining. The development of technology, coupled with the very concept of the TB-DECO, allows us to work in very close contact with our clients and their development offices, in order to find the best solution to their requirements.

Our team of engineers is delighted to come up with the solution that best meets each application (such as geometric shapes that are difficult to calculate).

DECO-Magazine

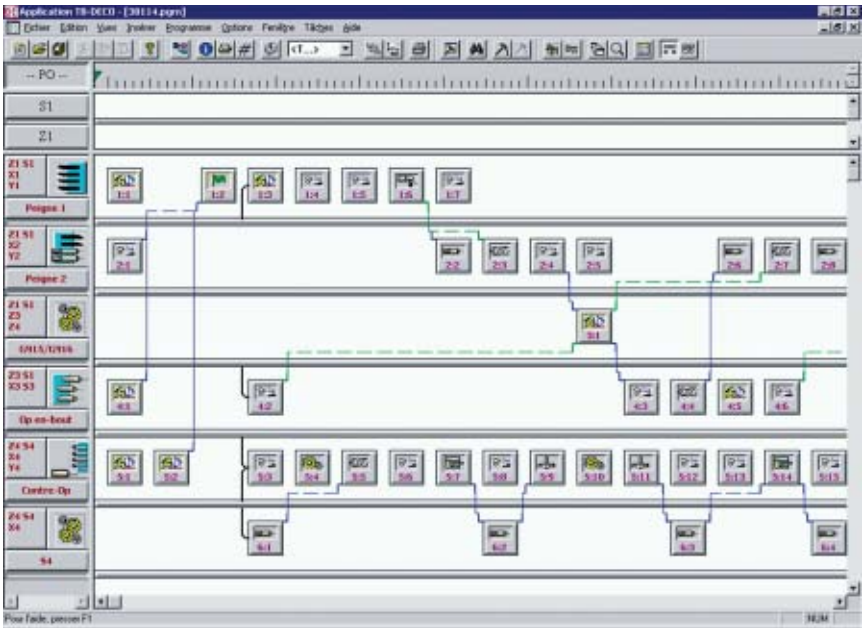
Mr. Charles, thank you for your information.

If you are interested, please do not hesitate to contact Mr. Charles at TORNOS.

It goes without saying that all the information received (e.g. drawings) will be treated in a highly confidential manner.

Counter-operation on DECO 13a

We shall supply further details of these units and macros in a future edition of DECO-Magazine.



0 – 90° adjustable device in counter-operation

Philippe Charles
Product manager – Single spindle
TORNOS SA
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Tel. 0041 32 494 44 44
Fax 0041 32 494 49 07

***H**undreds of DECO lathes installed in more than 40 countries produce medical parts for TORNOS clients day in and day out. The experience gained by the company in this sector is the guarantee of a productive and industrial solution for its customers.*

***I**n 2003 the medical and dental sectors represent approximately 20 % of orders received for TORNOS single-spindle products.*

***T**he medical and dental sectors are in the throws of expansion and, according to the forecasts of many experts, the annual increase in sales will be between 5 % and 15 % (depending on application) for the coming years, with world sales anticipated at approx. 10 billion dollars in 2003 (bone screws, orthopaedics, implantology, pacemakers, joints, etc).*

Additional bar feeders for DECO single spindle lathes

ROBOBAR SBF-216 and SBF-532

A radically new concept!
Two bar feeders that admirably complement DECO lathe capacities!

At the EMO in Milan, TORNOS unveiled the world's latest bar feeder for the DECO 10a and DECO 13a machines. This new model is based on the strengths of the SBF-532 bar feeder already successfully marketed for the DECO 20a and DECO 26a machines.

These two auxiliary units were fully designed and developed in harmony with the machines for which they are intended. This ensures that the loading system corresponds precisely with the lathe capacities, for which it was developed.

DECO Magazine met Mr. Hauri, the product manager for "bar feeders," to find out a little more about these latest loading systems.

DECO-Magazine
Hello, Mr. Hauri. Why new TORNOS bar feeders?

Daniel Hauri

TORNOS has a lot of experience with this type of product and we can now claim that we fully master all the possible interactions between machines and loading systems. Because we developed dedicated solutions, this means that we have eradicated all problems associated with fitting the so-called "universal" bar feeders, which may have compromised the machine. The bar-feeder operations are controlled by the PNC-DECO, which significantly simplifies the interface between machine and bar feeder, thereby doing away with any risks of incompatibility.

The unit as such is a true high-performance production tool.

DECO-Magazine
We can see that the production unit thus created is highly efficient, but does this solution provide anything else?

Daniel Hauri

Of course! The use of a "multiple guide channel" and the option of using an "interchangeable latched pusher" almost fully dispense with superfluous handling operations, thereby speeding up capacity changes when setting up the machine. The operator gains precious time.

I would also like to add that the new Robobars do not require the addition of vast numbers of expensive options, since the guide channels and sets of pushers that correspond to the machine capacity, are supplied as standard. When we supply an SBF bar feeder, the operator need not worry about future investments for his newly acquired production tool. It's all included!

DECO-Magazine
And are there any other technical innovations?

Daniel Hauri

Of course! The principle is based on the fact that the distance between tail stock and bar feeder is very short, thereby ensuring trouble-free operation without any risks of bar buckling.

The 100 % control of the bar feeder by the machine also provides maximum convenience for the operators. With our Robobar SBF bar feeders, clients will enjoy the best ways of benefiting from the vast power offered by the DECO!

DECO-Magazine
Mr. Hauri, we would like to thank you for the information.

We would like to remind our readers that they can contact the company specialists at the usual addresses, if they require further information.

A technical brochure on these new bar feeders is available on the company's site, at the following address:

http://www.tornos.ch/e/documents/d.tml

Solutions supplier…

A challenge, which does not intimidate the heads of the TORNOS "single spindle" and "multispindle" business units!

For many years, TORNOS has been supplying specialised solutions for many industrial sectors. Why now present this approach – which has been particularly developed at the EMO – as being something quite new ? Is it really different ?

To find out more about this approach, DECO-magazine met Mr. Cancer, head of the single spindle B.U. and Mr. Nef, head of the multi-spindle B.U.

DECO-Magazine
Hello gentlemen. Isn't the thinking behind the company's slogan, "Think parts – Think TORNOS", a bit flashy ? What is behind it ? Why is it being developed now ?

Carlos Cancer
The slogan actually represents the services currently provided by TORNOS – a complete, personalised solution that is fine-tuned to the requirements of the different sectors of industry and hence, our clients.

This is not a mere publicity gimmick but rather shows the growing relationships with our clients. We have exceptional know-how, which really provides added value to our clients. By developing this line, we are able to respond to a market requirement whilst also becoming more targeted in the solutions put forward.

DECO-Magazine
Does this mean that TORNOS will become a solutions provider of highly complex and specific solutions, leading to very high costs ?

Carlos Cancer
No. This is a combination of the strength of our current products. We are looking at a "universal" product range that in fact comprises the core of a highly sophisticated system.

For example, the DECO 13a machine, which produced medical parts during the EMO, is a standard machine. However, TORNOS know-how meant that it could be "dressed up" with specifically developed peripherals and accessories. This means that we could transform a standard machine into a highly valuable tool serving specific industrial sectors.

DECO-Magazine
The system indeed seems to be ingenious – but how do you develop these "customised" solutions ?

Willi Nef
We have been working in all sectors of activity for many years and are always in touch with the market. This means that we can always match requirements.

Solutions supplier…

DECO-Magazine
So you follow the market?

Carlos Cancer and Willi Nef (together)

Yes, but that alone is not enough!

If we want to provide innovative solutions, we also have to anticipate market requirements.

To do this, our technical and commercial colleagues are always seeking out new trends and developments.

We are currently providing precise solutions to different sectors, but this is not cast in stone. What we really want to do is provide our clients with added value – both today and in the future.

DECO-Magazine
As head of the business units (see boxed section), you have to monitor the development of your own units. How do you manage the relations between the units?

Willi Nef

The aim of TORNOS is to help its customers do business. As soon as we receive a new request, we analyse it from this point of view. If the part can be produced on a single or multispindle machine, then obviously the solution that best meets the customer's requirements is the one adopted.

DECO-Magazine
What are the fundamental criteria leading you to develop a new market or a new area of activity?

Carlos Cancer

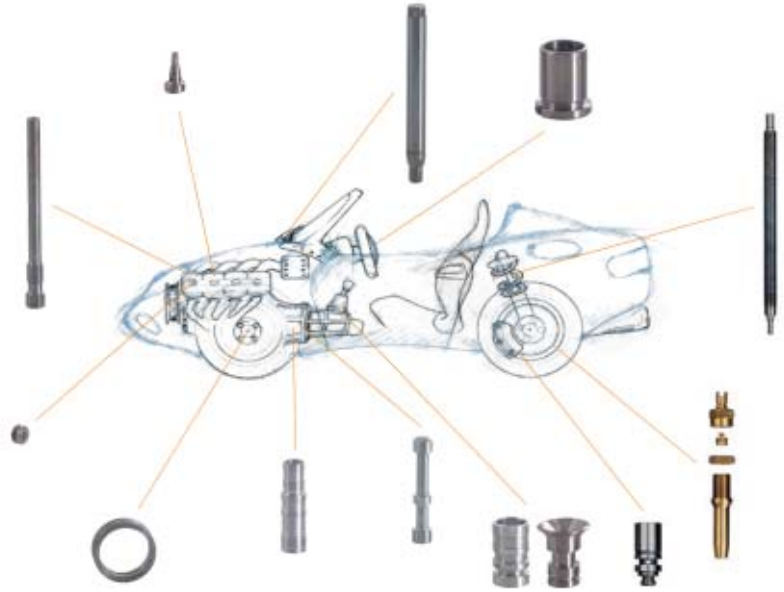
Don't forget that TORNOS has vast experience in small parts turning (more than one hundred years) and that more than 40,000 TORNOS cam-operated machines are still operating in the market. Coupled with the 4000 DECO and MULTIDECO machines, which are in daily production, these also represent a source of information that enables us to provide very specific solutions.

DECO-Magazine
Could this mean that TORNOS is developing applications in association with its clients in order then to resell the technology developed to others?

Carlos Cancer

Absolutely not. TORNOS enjoys an open relationship with its clients. If we develop a joint solution, then this is not automatically marketed – everything is examined on a case-by-case basis.

We build up and nurture confidence in our dealings with customers.



DECO-Magazine
To come back to your development lines, do you have other sources of information?

Carlos Cancer
We do, in fact, have a "marketing intelligence" section, which supplies us with information relating to the various markets. For example, investigations show that the industrial connector market is currently active.

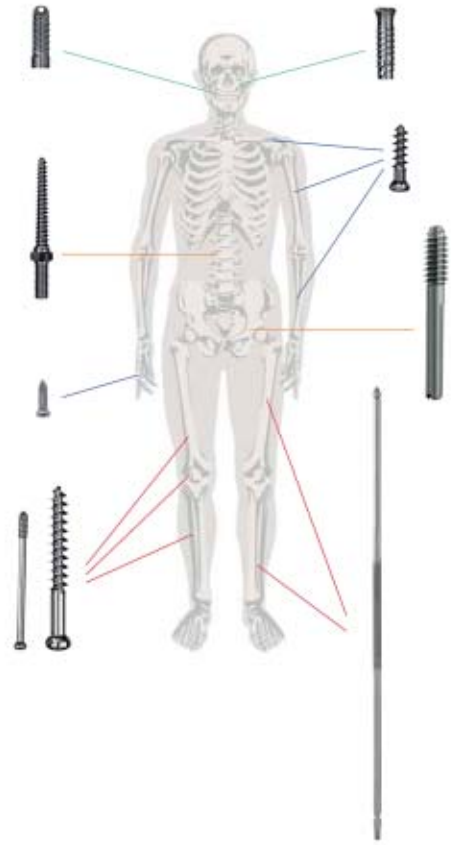
In August 2003, orders received from this sector throughout the world, showed 16.5% increase compared with the same period of the previous year. Following the trend of –19.1% in 2001 and –9.6% in 2002, these figures are quite promising and open up new possibilities.

DECO-Magazine
Thank you gentlemen for these facts, which demonstrate that your strategy is solid and clear. Is there anything you would like to add as a conclusion?

Willi Nef
We produced targeted documents covering various sectors – currently, the car, medical and fittings industries. The latter document demonstrates the execution of parts at very high production runs on the MULTIDECO (from 1.8 secs. per part)

This information will soon be completed and new applications derived.

Do not hesitate to contact us or consult the company's website. You will find all these brochures and a lot more besides.



www.tornos.ch/e/news/n.tml

The business unit structure is one that is geared towards customers, thereby allowing the company to apply a "highly targeted strategy". All those activities relating to customer solutions come under the responsibility of the BUs. These latter tap into the resources of the central departments, which serve the company as a whole, according to requirements.

We shall come back to this organisation and to its advantages in greater detail in a further edition of DECO-Magazine.

EMO 2003

Encouraging signs… and a winning strategy !

Even before this latest EMO, we discussed the TORNOS philosophy of finding the best ways of meeting customer and market requirements in Issue 26 of the DECO-Magazine.

"**W**hether your field of activity is in the car, medical, fittings, horology, spectacles, safety, electronics or even the micro-mechanical sector, TORNOS will doubtless have a solution adapted to your needs."

After the EMO, TORNOS noted that this approach – the main purpose of which was to provide a highly efficient solution to customer requirements – was a real success. This is a promise that hit the bull's eye and the company is not sparing any punches in keeping it.

This year, 1600 manufacturers were exhibiting more than 6500 machines. Of these, 5 were on the TORNOS stand ! With more than 500 clients, roughly 150 requests for quotation and 14 machines sold, the company achieved a positive result from this latest EMO.

The sectors illustrated on the stand really struck home. The presentation of an F1 Ferrari engine and a Ducati was, for many, synonymous with the concept of the power, performance and reliability of the TORNOS solution for the car sector.

TORNOS would also like to use this opportunity to thank the manufacturers for making these engines available.

This EMO seemed to indicate renewed interest and we sincerely hope that this will mark a positive economic change throughout the world in the machine tool sector.

The next EMO will be held in Hanover from 14th to 21st September 2005. The company's presence in the market will constantly be felt, especially through the more than 30 trade fairs during 2004 (information on this subject will be published in DECO-Magazine Issue 28 in March 2004).

When questioned on the approach to the "sector of activities", Mr. Nef, head of the Multispindle Business Unit, commented as follows:

"**I** would like to emphasise that our philosophy is not a marketing ploy that is purely centred around trade fairs. It relates to the search for the best solutions to satisfy our clients' day-to-day requirements. With this in mind, we are completely at your disposal".

(On this subject, please see the article entitled "Solution supplier" on page 15).

Why establish a company and invest in resources to improve a filtering system and enhance the working environment with high-performance machines?

CLEANMIST S.r.l. designed, produced and patented an innovative centrifuge filter.

CLEANMIST S.r.l. achieved this by implementing an idea of an engineer working in the oil mist filtration sector. This engineer had 15 years' experience, which he used to sell and apply to filtration systems. His aim was to improve and upgrade efficiency to provide a cleaner working environment.

The inventor designed a centrifuge filter, using a patented technological innovation, to purify the oil mist and fumes caused by mechanical machining processes whilst at the same time considerably improving the fume filtration properties without this having any effect on energy consumption.

CLEANMIST S.r.l. therefore designed a high-performance machine to purify polluted air flow using less energy, based on the actual flow values and deploying a "venturi"-based patented technological innovation applied to the centrifuge crown, to significantly improve the efficiency of oil mist purification.

To produce this unit on an industrial scale and thanks to the experience of its engineers, CLEANMIST S.r.l. took advantage of the simplicity of the construction systems used. The outside body, for example, was designed so that the separation point was located so as to have quick and practical access to the crown, thereby enabling unimpeded cleaning of the pyramid panels, which, coupled with the speed of the centrifuge, encourage coalescence, which is the key to permanent filtration efficiency.

Even the CLEANMIST S.r.l. accessories were designed and produced to provide straightforward application for the machine-tool manufacturers or final users.

CLEANMIST S.r.l. also designed specific accessories, such as cyclones or pre-draining, which, for certain applications, would increase efficiency.

Accessories:

Cyclone

Pre-draining

General description

The CLEANMIST S.r.l. filtration unit is a centrifuge with blades that is designed and produced as a low maintenance unit. It comprises only two mobile elements: the motor and internal crown. The motor is fully enclosed by clamping jaws. The crown, which is directly connected to the motor shaft, is dynamically balanced in our workshops and certified to provide several years' operation (unless deliberately damaged).

All surfaces are protected by a stoved, polymerised, epoxy-based coating and the crown is protected by galvanisation. All the units carry a warning plate.

Principle of operation of the CLEANMIST S.r.l. filter

The crown with "venturi" type holes (patented) to accelerate the passage of mist, has an opening at one end and is directly coupled to the electric motor The blades inside the crown generate a suction, which forces the oil mist across the panels, thereby initiating coalescence. The small particles are directed so that they strike the panels and form droplets before being flung once again against the internal surface of the top body as a result of the centrifugal force and evacuated through the exhaust line, the special shape of which ensures that the liquid is efficiently recovered and drained off. The spent air is expelled through a silencer unit located in the top body against the motor.

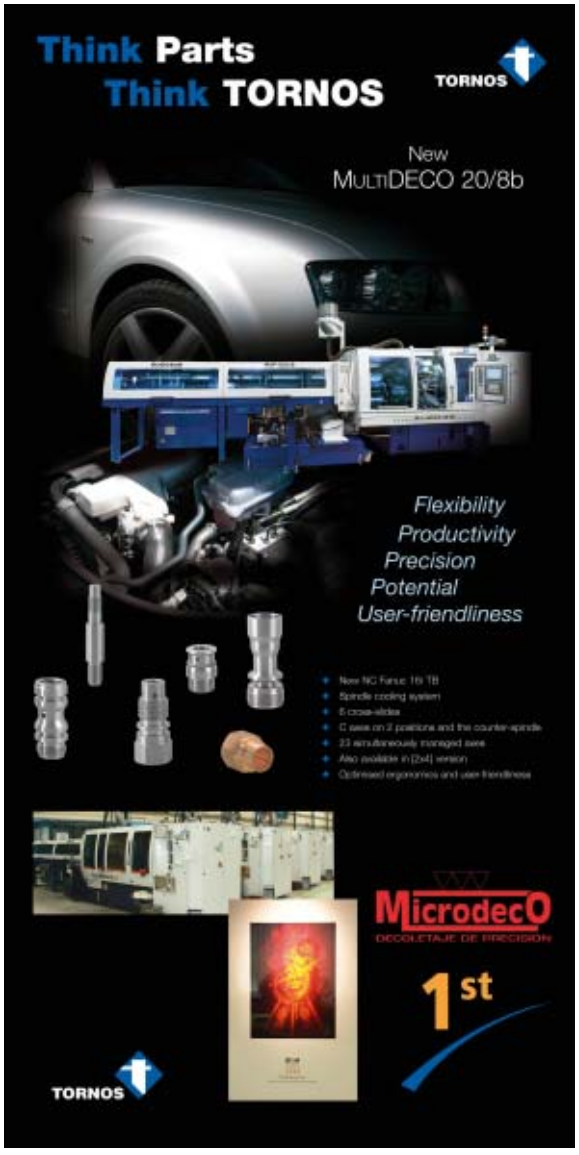
The bottom body comprises the holding seal, which is joined to the top section by clips. The suction orifice is located at the end and is fitted with a chip grid and oil mist diffuser.

The CLEANMIST S.r.l. filter operates efficiently all the time and its properties are such that it hardly ever needs any maintenance.

This device doesn't have any TORNOS number yet.

October 2003: an important milestone for European Quality.

The European Quality Award is Europe's most prestigious Award for Organisational excellence and is the top level of EFQM levels of excellence recognition scheme. Outstanding companies are rewarded for their excellence.



TORNOS is proud to announce that its Spanish customer Microdeco SA is a prizewinner in the European Quality Award.

To know more about the company, DECO-Magazine has investigated…

Microdeco S.A., was founded in 1963 with a 100 % Spanish capital. Specialised in precision bar turning, the company produces precision parts manufactured by chip cutting and spur gear machining in small or large batch production.

Specialised in manufacturing precision metal parts of 1 to 32 mm diameter, designed according to customer plans and specifications, Microdeco has a customer base spread over various field of activities (68 % automotive sector, 9 % household goods, 6 % office equipment and 17 % miscellaneous).

Microdeco premises, located in the town of Ermua (Bizkaia, Spain), currently cover a surface area of 9,500 m^2, of 5,200 m^2 comprises the covered plant and services area.

Production facilities basically consist of a series of cam or numerically controlled (CNC) multi-spindle, sliding headstock automated lathes, covering four different operational technology types enabling Microdeco to provide their customers with products perfectly tailored to their exact needs. Machines and know how offer the company a great range of machining regardless of how complicated the part to produce is.

The company also has a mechanical area for making various tools and equipment, and a series of auxiliary services such as warehouses for raw materials and the preparation of bar ends, ultrasound part cleaning equipment, dispatch warehouse, quality control and metrology and technical and administrative office, etc.

Microdeco currently employs a total of 90 people including technical engineers, graduates, specialist industrial technicians, administrative staff, skilled workmen and specialists in this activity. The workforce is distributed over the 12 areas of the company, with the production staff working 8-hour shifts and the rest split shifts.

Turnover levels have increased in recent years. Exports currently account for around 30 % of turnover, a figure that has remained stable over time, whilst investment levels have increased over this period. 2003 turnover figures are forecast at € 9 million, with a planned investment of € 1.6 million and a stable level of exports at 33 %. Special mention must be made of the investment level in 2001, considerably above what we would normally consider, and attributable to major plant extension over the period 2000-2001.

Microdeco has been working with TORNOS machines since its foundation and owns today more than 55 TORNOS machines in which we can find 9 DECO machines and 15 MULTIDECO Machines.

M. Manuel Iraolagoitia CEO of the company emphasizes the benefits realised in implementing the measures that have driven the company to the excellence.

"Our company is not only a winner with the prize, but in its everyday life, the motivation and satisfaction of employees for being part of the improvement also drive more satisfaction to our customers. The internal function also has improved as well as the economic efficiency".

DECO-Magazine
Is it possible for you to explain our readers the reasons for your success?

M. Manuel Iraolagoitia
Microdeco's success depends on the quality of the products we're running but the best product is nothing without highly motivated people. Then the active involvement of the whole company in all the projects and at all levels is a key of success. In term of method, we have implemented the 5S as basic discipline to obtain motivation and quality driven employees. We extended this systematic way of thinking to problems resolution. In addition we have implemented and continuously improved our system by EFQM references. We also implemented a 'Mini-Company' model as standardization tool of the daily activity management, i.e. everybody is responsible for his quality and deadline respects.

DECO-Magazine
What about the information in the company to achieve in this result?

M. Manuel Iraolagoitia
We have also implemented an 'Internal Communication Plan and Operational Meetings' as well as objectives and management plans. That means that every employee has access to the information and can also give feedbacks and suggestions at any time.

This associated with the most powerful and efficient machine tools is our secret for success!

DECO-Magazine
Thank you for your time and congratulation for your prize.

For more information, don't hesitate to contact

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Even faster production:

vmax technology makes it possible

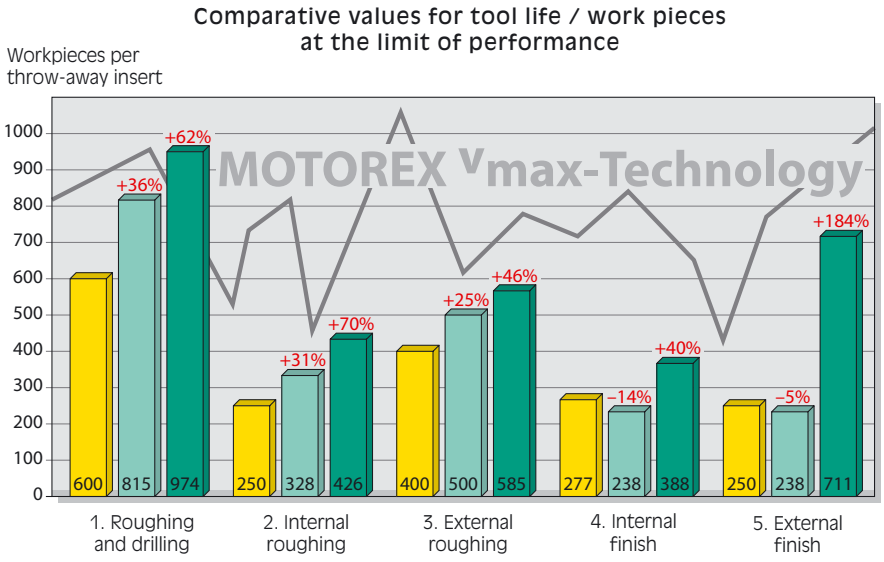
"Much quicker, more precise and more economical" – that was the forecast of the small parts turning experts a few years ago. The trend clearly pointed in the direction of higher production speeds. As a result of even more powerful machines and new technologies, this vision has long been reality.

The fact that such forecasts make those responsible in the small parts turning sector sit up and listen, is self-evident. Since the beginnings of the first series production at increased cutting and feed rates just 10 years ago, technologically remarkable progress has been made in the areas of machine tools, tooling, machining fluids and materials. Also of great importance for the perfect interaction of the factors mentioned, is the cutting oil used. The fact that time has not stood still, is demonstrated by the new vmax technology from MOTOREX.

MOTOREX-vmax technology compared

Metalworking is a precise operation and of particular interest are such properties as cutting and feed rates, surface quality, tool life and, last but not least, the output per machine hour. Therefore a practical test was recently run on a modern CNC machine at a neutral location, where the machine operator ran the machine up to its performance limit. Comparisons were made of the tool life and output between a modern, high-quality cutting oil and MOTOREX ORTHO 400 of the vmax generation. For evaluation purposes, five representative machining steps were performed on a workpiece made from molybdenum STAINLESS STEEL.

The following three test stages were run:



1) Production at the performance limit of the conventional modern cutting oil

2) Production using MOTOREX ORTHO 400 at the cutting values of stage 1)

3) Production at the increased performance limit with vmax technology and MOTOREX ORTHO 400

Surface quality provides unmistakable information about the course of the machining process. Ever more powerful machine tools, combined with the vmax generation of MOTOREX machining fluids, are the ideal basis for the successful maximisation of production performance.

Concerning heat and exponential performance enhancement

Up to now heat has been something that should be dissipated and avoided as efficiently as possible. This is no longer quite the case where the new vmax technology from MOTOREX is concerned. A clearly defined high temperature can trigger desirable chemical synergies at the crucial moment at maximum production speed during the machining process, thus making possible exponential performance enhancement in the first place. Previously, such experiments regularly went up in smoke – nowadays, impressive increases in output are achieved with the optimised factors and cutting values.

This enhanced performance is directly related to the solvent-refined base oils used that are low in aromatic hydrocarbons and which have been combined with synthetic materials and special additives in a novel way. The result is an above-average tool life with excellent surface quality and enhanced performance.

We will be pleased to give you further information about the new vmax technology and also recommend that you have a performance test carried out in your company:

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***A**bout the material used:*
UGINOX 18-13 MS (also X2CrNiMo18-14-3 or 1.4435).

***T**his stainless, austenitic (hardened by heat treatment) steel, is convincing, given properties, such as strong corrosion resistance towards acids and chlorine-containing media, excellent resistance to compression and deformation, good weldability and excellent polishing properties (mirror finish).*

***A**mongst others, it is used in the areas of chemical plant construction (piping), the food industry (tanks), marine engineering, the horology industry etc.*