

NUM Group

www.num.com

NUM [®]
CNC HighEnd Applications

NUM Group & History

More than 60 Years of Experience in Automation of CNC Machines

- 02 Words from our Chairman, Vice Chairman and CEO
- 03 History
- 04 NUM Solutions
- 06 Project Management
- 07 Engineering
- 08 Products
- 10 NUM Service
- 11 NUM Worldwide

Words from our Chairman, Vice Chairman and CEO

In 1961, ten years prior to NC control finding wide acceptance among users, NUM developed the first CNC controller. With a commercial launch in 1964, NUM was one of the first CNC providers in the world. Since then, we have maintained our position as technology leader in this segment and are eager to extend on this success.

Our market strategy is to help our current and future customers to construct a better machine and thereby securing them a competitive advantage on the market. As can be seen from our logo, we perceive ourselves as a CNC High-End Application company and we are focusing on selected market niches, where we undeniably have something extra to offer, and we have a proven track record to back up this statement.

Our long, successful track record supports this finding in an impressive manner. For decades, NUM has been a trusted supplier of solutions for the standard machine market. We will continue to utilize the openness of our systems to offer customers in this segment a competitive advantage. We will also make the necessary investments needed in R&D to ensure our standard features and functions meet the requirements of this market now and in the future.

As an international company headquartered in Switzerland, we have worldwide sales, application development and service locations (see back cover). This worldwide presence, coupled with the flexibility and open-

ness of our products, enables us to provide our customers with specialist engineering services that are in proximity to the machine manufacturer. Our main research and development departments in Switzerland and Italy are not directly participating in this decentralized approach to customer support.

Our main production facility for CNC systems is located in Italy. As part of our clearly defined strategy, we retain control over the development and manufacture of the core products of a CNC system, including the drives and motors, so that we are able to continuously influence the overall performance and flexibility of each CNC system. Beyond our catalog offering, with the support of NUM's engineering services, we are also able to propose third party products, for the realization of your unique solutions. This is done in close cooperation with our partners, which makes NUM a provider of high-end CNC solutions – where customers actually get everything from one source. The success of our partners and customers is our metric for success and directly justifies our position in the market.

Mission statement:

NUM CNC solutions provide machine builders with a competitive advantage.

The total cost of operations are becoming increasingly challenging for our OEM customers and end users.

For this reason we are very much committed to the highest product quality and reliability in combination with an efficient and responsive worldwide customer service.

NUM is in a highly positive development phase and can rely on a strong financial position. The CNC market is our passion and because we think long-term, we will continue to invest in technology, production, support and service in order to remain an attractive partner for both our current and future customers.

Chairman	Jonny Suter
Vice Chairman	Peter von Rüti
CEO NUM Group	Massimiliano Menegotto



Chairman: Jonny Suter, CEO NUM Group: Massimiliano Menegotto and Vice Chairman: Peter von Rüti

History

The history of more than 60 years of NUM is briefly explained. NUM AG's roots can be traced back to three companies:

- 1957 Establishment of the Güttinger AG, Switzerland, developer of electronic systems.
- 1967 Establishment of Servomac, Italy, developer of motors and servo drives.
- 1978 Establishment of the NUM SA, France (as a subsidiary of Telemecanique), developer of CNC systems.
- 1981 Güttinger AG is taken over by NUM SA. New company name in Switzerland: NUM Güttinger AG. In the following years, branch offices will be opened in the USA, Great Britain, Italy and Spain.
- 1988 Telemecanique, the parent company of NUM SA, merges with Schneider-Electric conglomerate. NUM held a special position focusing on the CNC automation high-tech sector there.
- 1990 NUM SA takes over Servomac.
- 2006 On February 1st, NUM and all of its subsidiaries were taken over by an investor and the management.
- 2008 Integration of NUM Taiwan.
- 2013 Construction of the new logistics center near by the NUM headquarters in Teufen.
- 2018 Founding of the Shanghai subsidiary.
- 2019 Founding of the subsidiary in India.
- 2021 60 years of NUM CNC development.
- 2022 Founding of the Guangzhou subsidiary (China).

NUM Solutions

Intelligent and Creative

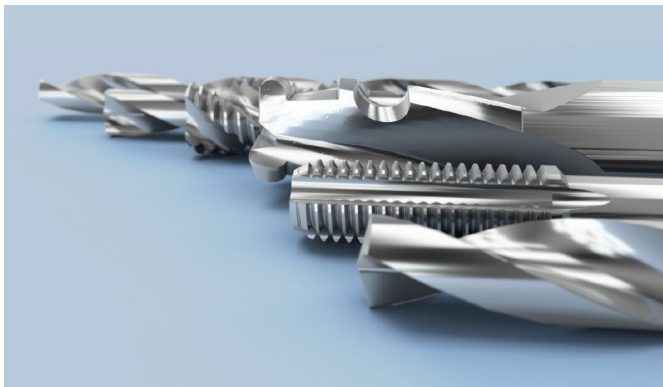
Outstanding solutions in machine automation share a common theme: they are always the product of outstanding performance, exceptional technologies and a high degree of creativity!

It's these core attributes that have earned NUM its exceptional reputation within the machine tool industry. We develop the most sophisticated, tailor-made CNC automation solutions, which guarantee maximum added value for both the machine manufacturer and the user.

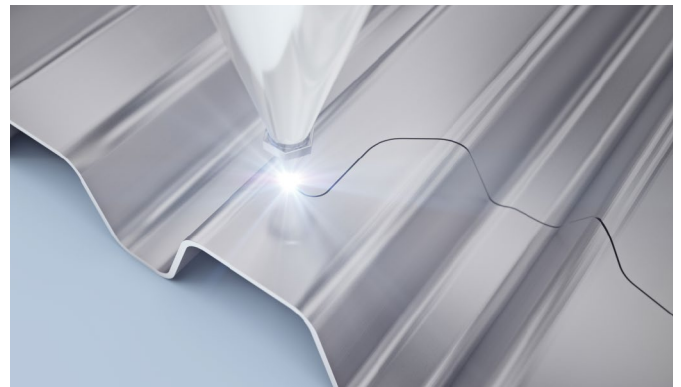
Our strength as proven CNC specialists begins where it ends for many of our competitors: with a pronounced application competence in the field of CNC-controlled production

machines. Our interdisciplinary expertise, which has grown over decades, is reflected in all our solutions – this directly benefits you as the customer, user and partner.

We have developed countless customer- and application specific solutions for diverse industries – practical solutions for professional needs. With this in mind, our engineers create groundbreaking complete solutions for demanding applications.



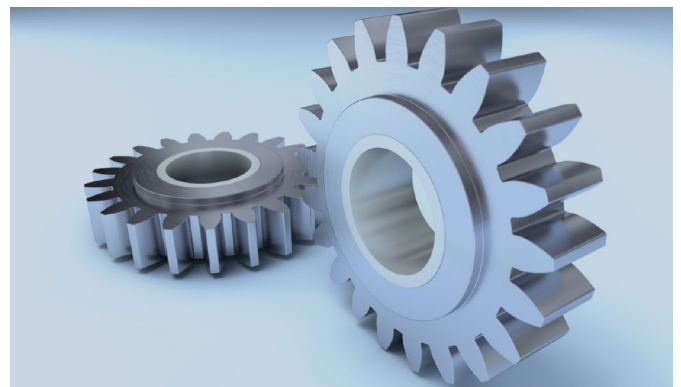
NUMROTO – Successful trendsetter in high-precision tool grinding for many years



NUMcut – A complete solution for advanced cutting machines



NUMspecial – Creative and practical solutions for your specific applications



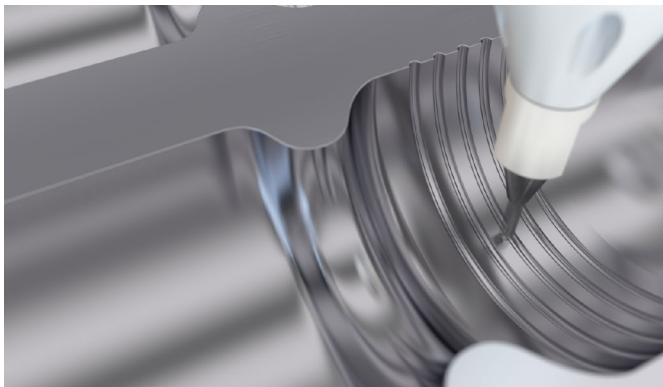
NUMgear – Intelligent total solutions for new machines or as a retrofit in the field of gear machining



NUMtransfer – Flexible, scalable and adaptable for all types of transfer machines, including linear, rotary transfer and multi-spindle machines



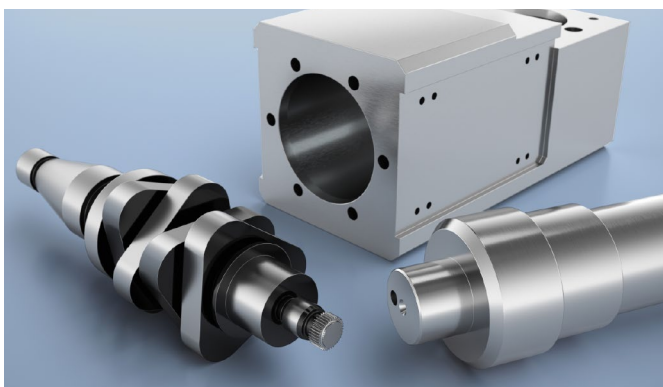
NUMmill – Flexible solution with a shop floor programming for extensive milling cycles, including full 3D simulation



NUMhsc – Excellent quality at the highest speeds on machines with 5 or more axes



NUMwood – Long tradition with powerful complete solutions in woodworking



NUMgrind – Grinding and dressing cycles, with intuitive shop floor entry screens and 3D visual validation



NUMretrofit – Rational extension of the service life of your machine by years

Project Management

Working with You to Find the Best Possible Solution for your Project

Project Management

NUM supports you with your projects in a way that is ideal for both your business and infrastructure. However, the goal of our cooperation always remains the same: **to work with you to find the most efficient solution.**

Project support ProDesign

Efficient consulting for optimal application solutions

This model is ideal for companies with their own development teams and automation specialists. As an external partner, we bring our entire know-how in the field of CNC automation and take on an advisory role.

Project cooperation CoDesign

Combining knowledge – harvesting synergy

Your team of developers joins forces with our specialists. Together, we realize the automation of your machine with clearly delineated responsibilities. This type of collaboration has proved itself to be extremely efficient in many past projects and leads to a very efficient time to market.

All-in-one solutions AllDesign

Delegating responsibilities – controlling results

Acting as a general contractor, we take charge of the overall project and assume full responsibility for the successful implementation. Starting with the product requirement specifications, including development, commissioning and tuning, and finally, providing support and service.



Engineering

Proven CNC Engineering Company with its Own Products

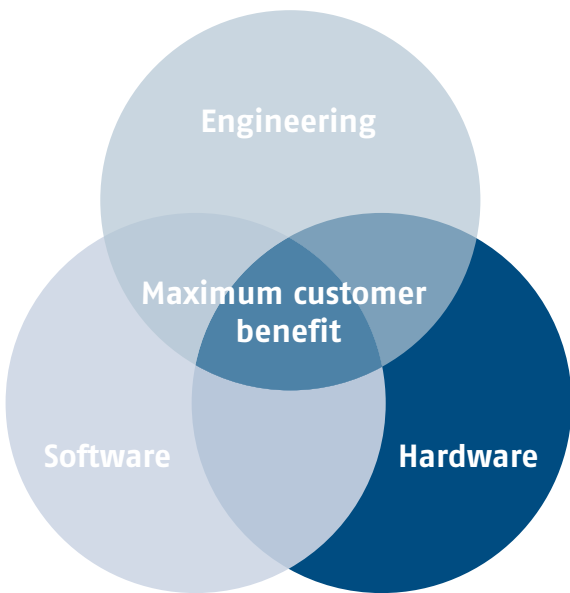
Flexible engineering to meet to your individual needs - this is what distinguishes NUM in the market!

Brilliant automated solutions don't just happen; they are based on superb ideas! This is why we focus on more than just optimizing software and hardware; we build on the innovative abilities and creativity of our specialists.

To differentiate themselves from competitors, machine manufacturers are increasingly focusing on the development of complex, innovative high-tech solutions that provide customers with maximum added value. However, this trend demands extensive expertise across a wide range of areas, and this is precisely our strength, as a proven CNC engineering company with our own products.

When the goal is optimizing complex production processes, it is not enough to simply combine powerful components such as machines, CNC, servo drives, motors, and measuring systems.

To make daily production operations profitable, software perfectly optimized for the specific production process is required. It also needs an experienced team of engineers with diversified skills who know the industry-specific requirements in detail and are able to pursue a clear goal. In short, you need our help to optimize the overall production process and sustain its successful long-term operation, using the latest technological advances combined with superior support.



NUM employs experts with experience in various technical fields.

As a customer, you have the security of knowing that your partner operates at the cutting edge of CNC technology. Our goal is to provide you with the engineering, software and hardware, to allow you to fully exploit the advantages of the latest CNC developments.

Your Automation Solution

*num*roto.
*num*cut
*num*gear.
*num*hsc.
*num*transfer.
*num*wood.
*num*special
*num*mill
*num*grind
*num*retrofit

AllDesign 100%
 CoDesign
 ProDesign 0%
 Engineering
 Individual Engineering

Products

The graphic shows a collection of NUM products including a CNC control panel, a servo drive, a motor, a cable, and a sensor.

Products

Modern, Scalable, Open, Powerful, User-Friendly, Comprehensive

Using our own products as a basis for the development and engineering of customer-oriented solutions.

CNC Controls

NUM offers a wide range of products for the automation of CNC machines. The modern, scalable, open and high-quality system guarantees high machine availability and investment security.

The CNC control itself is a key element of the solutions. Powerful processors with high computing speeds and an intelligent layout with potential for expansions ensure a high preservation of value. The PLC is programmed according to IEC 61131-3 and the modern development environment provides tools for development, commissioning and servicing.

Supporting many hundreds of axes and channels, as well as thousands of I/Os, the Flexium+ and FlexiumPro product families are easily capable of controlling even the most demanding applications. Thanks to the excellent scalability, even small configurations can, of course, be optimally mapped.

Operating Panels

Various control panels are available, which can be freely combined with the CNC controllers. The control panels are delivered either with an integrated PC or are intended for operation with an external PC. The control panels can be supplemented with machine control panels, which contain important operating elements for controlling the machine.

Drives

Modern, compactly designed NUM servo drives in conjunction with the high-performance NUM CNC controllers lead to perfect results. Modular in design, compact in dimensions, and low in power consumption, they ideally meet the requirements of modern systems. The software is readily adaptable to meet customers' specific requirements at every level. Thanks to their high efficiency, they support the goal of making the machines as energy-efficient as possible.

Motors

Our broad portfolio comprises more than 7,000 servo and spindle motor variants, with continuous torque from 0.5 Nm up to 500 Nm, torque and linear motors.

The so-called "single-cable" motors only need one connecting cable instead of the usual two. The encoder connection



From top to bottom: FS184i control panel with MPO7 machine control panel, NUM DrivePro servo drives, three SPX "single cable" servomotors, TMX torque motor, LMX linear motor

is made just using two wires integrated in the power cable. This strongly simplifies the cabling, reduces cable chain dimensions and decreases machine costs.

Accessories

NUM's spectrum of automation products is complemented by a comprehensive range of supplies. The supplies are determined by our specialists, together with the customer, and can fulfill all the specific project requirements.

Safety

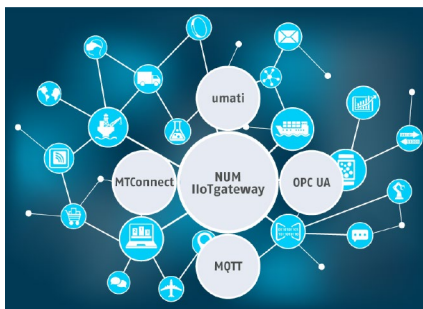
NUMSafe is the comprehensive and easy-to-use safety architecture of the CNC personal protection system.

A safe PLC manages the safety related machine's logic and the NUM-SAMX drive module integrates the safe motion functions (SLS, SLP, SOS ... and many others) providing a fully integrated solution.

Flexium Tools

Flexium Tools is a unique environment allows for complete project management: PLC and Safe PLC programming, CNC and drives parameterization, I/Os management and various instruments make the system's tuning easy (ballbar, frequency analysis, oscilloscopes, etc.)

IIoT / Industry 4.0 / Smart Factory



Fieldbuses such as EtherCAT or CAN are mostly used for horizontal integration. For vertical integration to SCADA, MES and ERP NUM IIoT-gateway provides various protocols (OPC UA, MQTT, MT-

Connect, umati, OPC DA) which allows an easy machine's integration is modern and smart Industry 4.0 factories.

NUMROTO

NUMROTO is a comprehensive software package for producing and reshaping a wide range of tools.

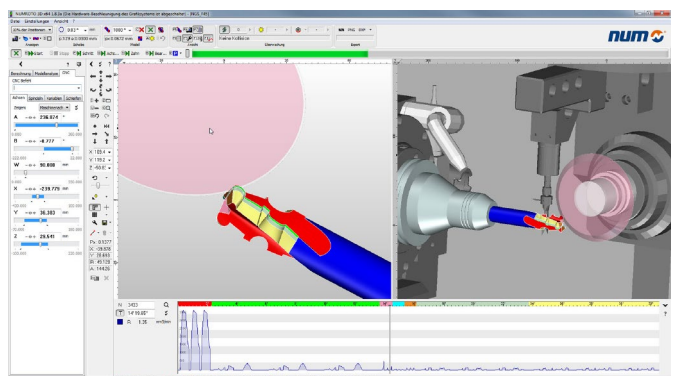
NUMROTO was NUM's first complete solution, and is now the market leader and trendsetter in tool grinding. Our proven software range has been the first choice of tool manufacturers and grinders for over 35 years. Since then, innovative high-tech solutions, continuous development and comprehensive user know-how have guaranteed quality and economy for all standard and special tools. The NUMROTO team is made up of specialists with comprehensive crossdepartmental knowledge of all tool grinding and CNC controlled machine areas. Product development is made in close cooperation



tion with users and machine manufacturers alike.

NUMROTO complete solution combines the NUMROTOplus software programming system and all elements used to transfer this system to the tool. The system can be expanded with functions such as 2D and 3D simulation, comprehensive probe cycles for tools and wheels, wheel truing during the process, job control and much more.

The complete system solution is comprised of the CNC, servodrives, motors and complete switching cabinet. The system is rounded off by training according to customer needs and remote diagnosis methods.



Example of a NUMROTO 3D simulation.

NUM Service

Assistance and Support during the Entire Machine Life Cycle

NUM Service, Customer Service and Training

Your decision to procure a system and a solution from NUM marks a long-term investment. We see ourselves as your partner from the idea, design and synthesis stages, to on-site customer service. Our motto is, "One Step Ahead", we use our worldwide presence to be there for you before a problem arises by providing international support and assistance throughout the entirety of a product life cycle.

Our claim for the future is defined by NUM Service in a clear, customer-specified, proactive support agreement. Together with our customers, we draw up an inventory in order to identify any potential for improvement. We can then offer these in a targeted and customer-specific manner. We focus less on the standard that is customary in the industry, but rather on individual customer's needs.



Machine manufacturers and end users can make equal use of NUM's service. Usually the end user first contacts the machine manufacturer, who knows the machine best, and whenever necessary NUM provides direct support. The same applies to end users if the machine manufacturer does not support them.

Spare parts can be delivered as quickly as possible thanks to our national agencies and partners. Also, spare parts delivery times can be reduced thanks to the local storage of each NTC.

NUM has a global and efficient network of service points and branches. Our proven 3-level concept is structured as follows:

- NTC:** NUM Technology Center – Competence Center with its own spare parts warehouse
- Agent:** Independent partner company of NUM with local spare parts warehouse. Support and regular training by our specialists
- Contact:** Contact person on site, communicating in the respective national language for our customers

To keep machine downtimes as short as possible in the event of a motor failure, NUM Service can offer the production and delivery of new servo motors within 48 hours.

Customers with a service contract achieve even greater security. This guarantees the availability of parts in the NUM branches, taking into account the CNC systems installed at the user's site. This is particularly applicable for older systems, where the availability of spare parts is becoming more complex.

NUM attaches great importance to the long-term support of its control and drive systems to guarantee customers the longest possible machine running times. Most components are available for well over 10 years or are replaced by compatible successor products. An example of this is the customer service still offered for discontinued products that were launched on the market over 30 years ago.

Training

NUM is committed to transferring its knowledge on a regular basis. In training courses, our specialists share their comprehensive CNC knowledge, as well as special product, drive, and application expertise. Our extensive range of training courses are oriented towards your individual requirements; whether it be operator training, maintenance, repair and service training, or programming training in PLC, CNC, HMI, etc., NUM has you covered.

Support

For professional analyses, a perfect infrastructure is available to our experts in all centers of excellence. This ensures we are able to provide you fast and efficient support, anywhere in the world. We also leverage the benefits provided by the latest communication technologies, such as remote maintenance over the internet.

NUM Worldwide

Get in Touch with Us

Would you like to be regularly informed about engineering and product news from NUM? Do you prefer personal contact at a trade fair? Is social media your thing? Let us get in touch with you!

We communicate via platforms such as our website, customer magazines, social media channels, trade fairs, and direct contact with you to share our engineering and product news.

Website

Visit us at num.com. With a few mouse clicks you will find all relevant information in five languages. The website also hosts a short video which introduces all our services and products.

Social Media

NUM is active on LinkedIn, WeChat, Twitter, Facebook, Instagram and Line. On the back of this brochure you will find the direct links to our channels. Follow us today!

NUMinformation / NUMROTO flash

All issues of our customer magazines can be downloaded from our website. Please contact us if you would like to receive issues by mail in printed form.

We are NUM

Let our passion for creative CNC automation inspire you and let us implement your project together.



International Fairs

We look forward to your visit at one of our numerous exhibition stands. You will find a current list of trade fairs on our website. Our branch managers, product managers and engineers look forward to an interesting exchange with you.



Complete CNC Solutions Worldwide



NUM systems and solutions are used worldwide.

Our global network of sales and service locations guarantees professional service from the beginning of a project to its execution and for the complete life cycle of the machine.

NUM has service centers around the world. Visit our website for the current list of locations.

www.num.com



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