Tool Alliance makes extensive use of NUM’s grinding machine from various manufacturers, including the machines’ control systems as NUMROTO Flash software, primarily for reasons of performance and production efficiency. Tool Alliance is one of the largest licensees of NUMROTO in the United States.

Founded in 1972 and still privately held, Tool Alliance operates a number of technology-focused manufacturing facilities located in Huntington Beach, California, and in several other key locations throughout the United States. In addition to its own corporate headquarters, Tool Alliance maintains engineering, manufacturing, marketing and sales facilities in New York, Los Angeles, Houston, San Antonio, Nashville, Scottsdale, Dublin, and San Leandro, California, and is supported by internal research, design, engineering, manufacturing, marketing and sales facilities in the United States, Europe, China, and India.

Patrick Schmid, NUMROTO Project Manager, and Steven Schilling, General Manager of Tool Corporation, give us an insight into the relationship between Tool Alliance and NUMROTO.

Patrick Schmid, NUMROTO Project Manager / Steven Schilling, General Manager of Tool Corporation

Exhibitions 2022 is NUMROTO is there!

Tool Alliance makes extensive use of NUM’s grinding machines at its manufacturing facilities. Tool Alliance is our CNC technology partner, which creates a win-win situation for both companies. We benefit from having an extensive library of tools that we have produced with NUMROTO. Tool Alliance also has a special skill of incorporating the library in a centralized information standard which is continuously updated and maintained. The NUMROTO software ensures that thousands of tool programs which can be accessed by several hundred users – at the same time.

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Mr. Mark Wortsman, Technical Director of Tool Alliance and President, owner and President of Tool Alliance / Steven Schilling, General Manager of Tool Corporation

Four key innovations in the new version 5.0.0 of NUMROTO

The Production Technology Division of Tool Alliance has released a new version of its flagship software: NUMROTO 5.0.0. This new version features a number of key innovations, including a new feature that allows for world-class dynamic grinding wheel measurement and an extensive library of tools that can be accessed by several hundred users. The new version also introduces early generation CNC machines and then retrofitting them is available for these machines.

Patrick Schmid, NUMROTO Project Manager / Steven Schilling, General Manager of Tool Corporation

Exhibitions 2022 is NUMROTO is there!

NUM will be exhibiting NUMROTO at various trade fairs around the world this year. We will be presenting NUMROTO innovations and features to all our customers and end users. We will be looking forward to meeting you.

On our website, you can find all the information about our upcoming trade fairs, and we are looking forward to meeting you.

Best regards,
Patrick Schmid, NUMROTO Project Manager / Steven Schilling, General Manager of Tool Corporation

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NUMROTO is the world’s leading grinding wheel measurement solution based on 3D simulation technology. With NUMROTO, you can verify 3D simulation results on the production floor. NUMROTO allows for world-class dynamic grinding wheel measurement and an extensive library of tools that can be accessed by several hundred users.

Patrick Schmid, NUMROTO Project Manager / Steven Schilling, General Manager of Tool Corporation

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Perfecting full radius or corner radius cutters

As an additional centre less universal programming:

The relief of the spherical end face, which is ground over the wheel along the spherical relief (CH-50052480 special grinding functions are required). More in detail.

There are now various applications in the path calculation and the creation of the final file, reducing non-productive time.

For the form relief, it is now also possible to link the feedrates, cyclicalized and radially. There is a new 'tool button in the references which activates all links.

With a faster 'shake' of the cutting angle can be calculated automatically, depending on the flute shape, the cutting edges can change automatically, cyclicalized and radially. The finishing edge angle is determined from the diagram as an information.

With the flute-X, the cutting edge can be calculated automatically, depending on the flute shape, the cutting edges can change automatically, cyclicalized and radially. The finishing edge angle is determined from the diagram as an information.

If a form relief is machined cyclically and "Front and rear infeed" is active, a separate feed rate can be defined for the infeed.

Cylindrical Grinding Grooving: There is a new checkbox to automatically limit the range to "between the end of the cutting edge and the beginning of the chamfer" to grind a neck groove.

With CPUs with 6 or more cores, the simulation becomes even faster.

• Calculated cutting angle is therefore now displayed as information.

Figure 5 Simulation of a cross gash

The above pictures clearly show that the NC simulation of NUMROTO has been excellently expanded and optimized. Practical examples in the sub-document range are also possible. This allows the modeling of complex form reliefs without causing a performance hit.

• There are now various applications in the path calculation and the creation of the final file, reducing non-productive time.

• Many new functions have been added to the external calculations. These include proliferation of people with their own path calculations, we offer customized training courses for a detailed exploration.

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Figure 5 Simulation of a cross gash

There is now a new "simulation" dialog that can be program internally for all machining operations. This enables a consistent separation between machine geometry and correction (horizontal and vertical corrections from version 5.0).

The proven relief operation is now expanded with a new pressure wheel relief which can be adjusted to the own radius of the pressure wheel. This is a prerequisite for the calculation of the calculation of a cross gash is engaged, a single-point grinding wheel can therefore be used. This method requires only minimal movements during grinding, which means that a good accuracy can be achieved.

Figure 4 Simulation of an

Perfecting full radius or corner radius cutters

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In addition to the previous "straight chisel edge", the "bipolar" chisel edge, consisting of a sphere or a straight edge, which also lies on the sphere radius, can be used for this. It is a new expansion for instances when a diagonal cut of all cutting edges (except for STL references which activates all links).