



Press info 09/08
WinFlexIPS^{Plus}

Press information

TRAUB programming system WinFlexIPS^{Plus}

3D-simulation software turns 'in a regal manner'

High-performance functions, simple programming and optimization of NC program cycles as well as 3D simulation of machining – all this is offered by the current programming system WinFlexIPS^{Plus} from TRAUB. Compared to the WinFlexIPS version, the user of the 'Plus version' has access to additional benefits, such as the complete depiction of the real operating elements and of the 3D work room of the machine. At the AMB 2008, this will be demonstrated *live* on large-format screens and a TNL26 machine with a 'king figure' made of acrylic glass.

The parallel programming and depiction of up to 5 sub-systems with simultaneous simulation of the machining, as well as numerous functions for creating, checking and optimizing the machining process have always characterized the WINFlexIPS.. WinFlexIPS^{Plus} now opens up even more comprehensive possibilities of machine usage with regard to cost-effectiveness and efficiency for the user: Planning, set-up optimization as well as instruction and training.

This means that machine usage planning, work area investigations or set-up planning in the 3D model can now already be carried out at the PC with the additional function 'manual operation' in accordance with the real machine – exactly as if you were in front of the machine. This optimizes the set-up and programming process and ensures considerably shorter set-up times, increased process reliability and improved machine utilization.

The set-up planning in the 3D model machine includes, for instance, the loading of the turret with precise 3D models of the tool holders or the indexing of the turret in manual operation for checking freedom from collision and to determine the tool changeover point. The process of the tool carriers and of the counter spindles to determine the space relationship between turret and clamping means and the checking of the clamping jaw position (C axis position) in manual operation for collision-free drillholes between the clamping jaws are also done in the 3D model.



Press info 09/08
WinFlexIPS^{Plus}

The preparations for setting up the handling can also be optimized. One example of this is the determination and definition of intermediate positions of the gripper in the work area in order to guarantee collision-free sorting of the finished part.

WinFlexIPS^{Plus} can also be used extremely effectively in training courses in the control and operating functions for TRAUB machines. The software is used both as a tool to optimize the introductory phase of new machines and to train new employees. The user can thus move training times from the machine to the PC workplace and save production times at the machine.

The TRAUB philosophy of almost 100% compatibility of all controls and software variants has also been rigorously implemented with the WINFlexIPS^{Plus} – from the first generation to the current version. The user can deploy any new software version, without having to rewrite programs. The focus of the software development is on the machine so that the machine software is always exactly identical to the software on the PC: The identical functionalities mean that the user has the certainty that the programs tested on the PC will also run smoothly on the machine later on.

The basis for program control, optimization and simulation is always directly the NC program in TRAUB TX8x format. The TRAUB TX8i CNC core on the PC controls the sequence of the simulation identically to the machine sequence. The operator therefore always has the result directly in front of his eyes.

The program optimization and synchronization can be made directly in the simulation model, with the parallel simulation in 2D or 3D. Selection and start of the simulation can be done at any point in the program. The machining situation is always shown that corresponds to the current cursor position in the NC program. The machining process can be moved 'forwards' or 'backwards'; the relevant cursor position in the NC program is tracked constantly so that there is always a reference to the NC program. In particular, with multi-axis or multi-slide machines, this makes programming easier and shortens the optimization and set-up process considerably. The idle times of the machine are also reduced.



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An overview of the benefits of the programming system WinFlexIPS^{Plus}:

- Fast and reliable programming as a result of optimized standard
- Clear depiction of the program sequence in plain text.
- The NC program is available immediately following the graphically interactive input and can be executed at once (compilation via a postprocessor is omitted).
- The patented data linking and automatic refeeding of changes between dialog and NC program can be changed at any time between dialog entry and NC single record entry.
- This makes the 'optimization in detail on NC record level' possible without losing the options and advantages of dialog programming as with the use of post-processors.
- Program optimization directly in the simulation model, parallel simulation forwards/backwards. Simulation optionally in 2D or 3D on the basis of the NC program in TRAUB format.
- At any point in time, the most cost-effective programming method is available: The decision either 'only dialog programming' or 'only NC record programming' is thus no longer necessary.
- Fast and reliable planning machine usage planning, work area investigations, set-up planning in the 3D model with the additional functions of manual operation in accordance with the real machine.
- Optimization of the set-up process with the functions manual operation and automatic operation in accordance with the real machine.
- Instruction and training of control and operating functions for TRAUB machines. Tool for optimizing the introduction phase of new machines and for training new employees.

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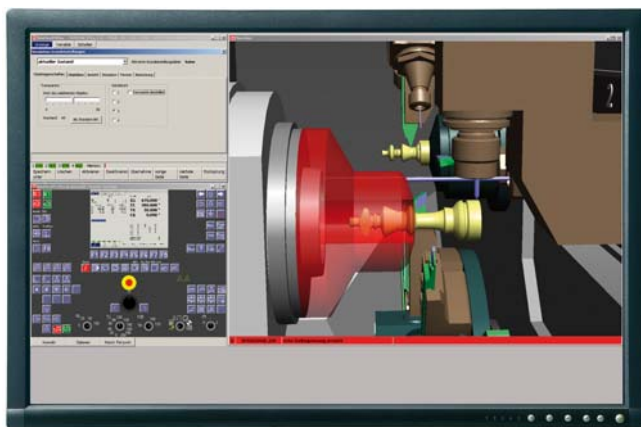


Fig. 1
AMB 2008:
Trade fair part 'Acrylic

King' on external
PC with WinFlexIPS^{Plus}

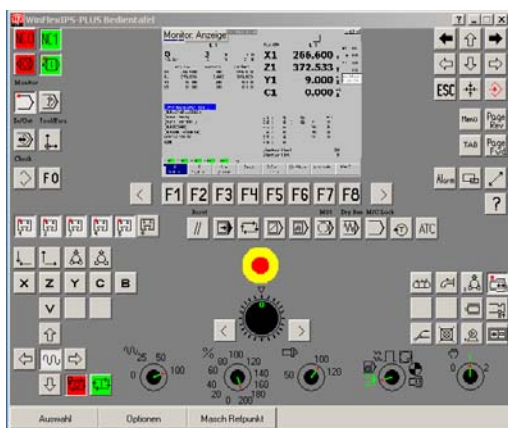


Fig. 2
WinFlexIPS^{Plus}:
Exact depiction of the
operating panel of the
TRAUB control

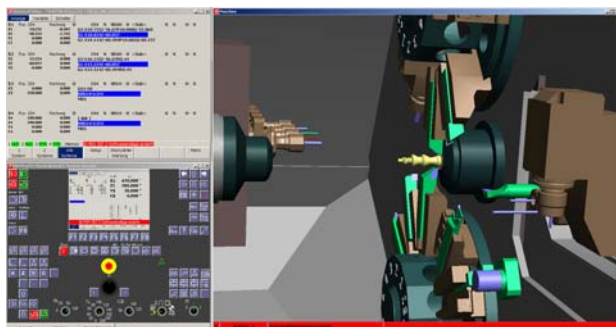


Fig. 3
Screen view of the
TNL26 in
WinFlexIPS^{Plus}:
Operating panel,
machine screen and
work area depicted in a
transparent way.

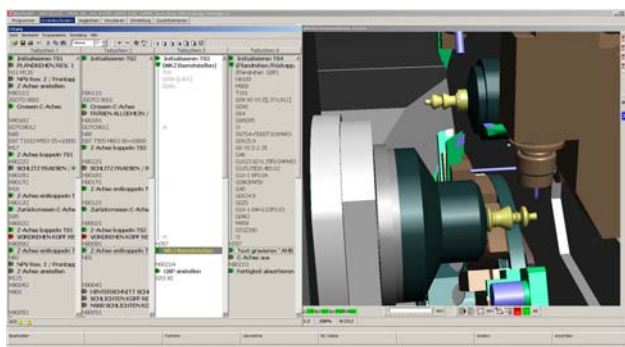


Fig. 4
Programming of 4 sub-
systems with parallel
simulation at the TNL26