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WinFlexIPS^{Plus}

Press information

TRAUB programming system WinFlexIPS^{Plus}

New programming system with even more powerful functions for programming, optimization and simulation

Reichenbach. TRAUB Drehmaschinen GmbH & Co. KG is presenting its new programming system WinFlexIPS^{Plus} at the EMO Hanover 2007 to a broad trade public for the first time. It involves the enhanced version of the proven system WinFlexIPS, tailored to the ideal use of the TRAUB machines with the functionalities programming and simulation on the basis of the TRAUB TX8i CNC core - supplemented by the additional advantage of manual operation of the entire machine functionality. In addition to the previous benefits, the user thus has the advantages of the real 3D model of the machine and the operating elements of the real machine.

The parallel programming and depiction of up to 4 sub-systems with simultaneous simulation of the machining, as well as numerous functions for creating, checking and optimizing the machine process have always characterized the WinFlexIPS.. Whereas these options on the 'real machine' have always set the trend for modern programming systems, WinFlexIPS^{Plus} now offers the user even more extensive options for using the machine with regard to cost effectiveness and efficiency. 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 - practically 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.



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The preparations for setting up the handling can thus also be optimized by ascertaining and determining the intermediate positions of the gripper in the work area for collision-free selecting of the finishing part.

Furthermore, WinFlexIPS^{Plus} can also be used extremely effectively during instruction and training of control and operating functions for TRAUB machines and as an aid for optimizing the introduction phase of new machines and to train new staff. The user can thus move training times from the machine to the PC workplace and save production times.

The TRAUB philosophy of strict consistency, compatibility of all controls and software variants has also been rigorously implemented with the WinFlexIPS - 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: With WinFlexIPS^{Plus}, programming, optimization, simulation and testing of the NC program can thus be carried out on an external PC beforehand. The identical functionalities mean that the user has the certainty that the programs tested on the PC will also run smoothly on the machine.

The result of all input, 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 advantages:

- Fast and reliable programming as a result of optimized standard program elements.
- Clear depiction of the program sequence in plain text.
- The NC program required for the machining task is available immediately after the graphical interactive entry and can be carried out immediately. Translation with post-processor is no longer necessary.
- 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' position 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.
- The user selects at any point in time the most favorable programming method. 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.
- Planning and 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 and an aid for optimizing the introduction phase of new machines and for training new employees.

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Fig. 1 Screen view
WinFlexIPS^{Plus}:
Operating panel;
machine screen and
simulation depicted in a
transparent way.



Fig. 2
WinFlexIPS:
Programming of 4 sub-
systems with parallel
simulation

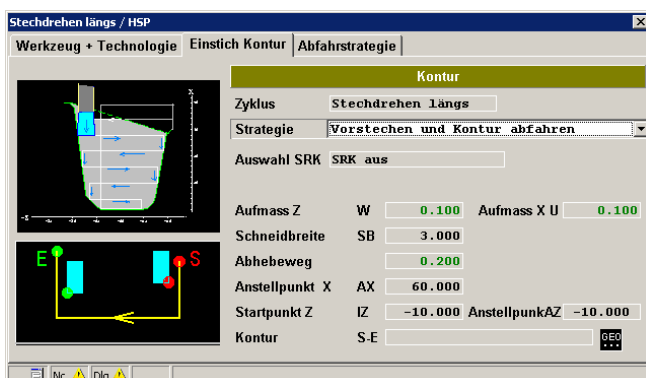


Fig. 3
A comprehensive cycle
library makes program
creation easier



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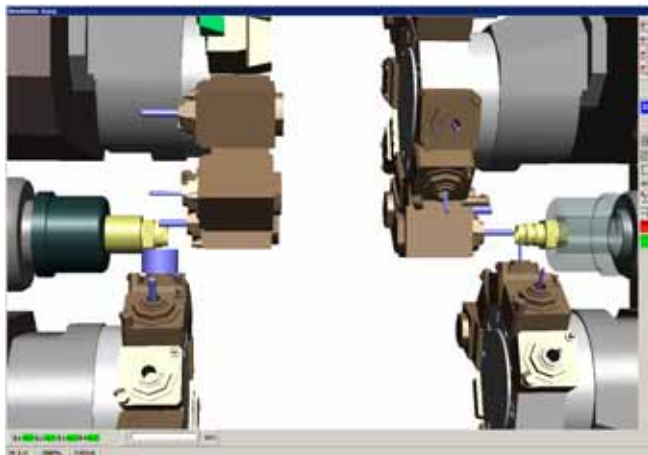


Fig. 4
WinFlexIPS^{Plus}:
3D work area
simulation

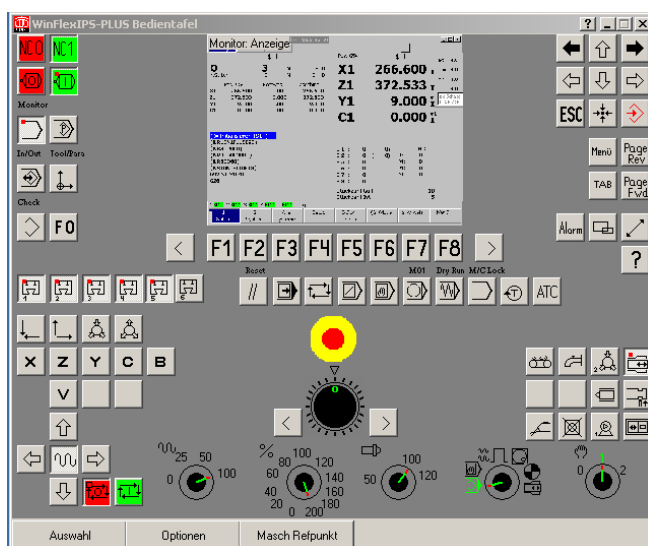


Fig. 5
WinFlexIPS^{Plus}: operator
control panel