

# : smirt dieNC

easy, fast, safe, effective machining

SMIRT DieNC is an add-on module to SMIRT DieShop designed to create tool paths for planar faces and drilling holes. The “drag & drop” technology is used to create tool paths directly on the solid geometry with no manual entry of coordinate values.

#### The SMIRT advantage

SMIRT DieNC takes full advantage of all the features within SMIRT DieShop. The ability to extract data and information from multiple CAD sources, the simple and intuitive user interface and the sharp, clear graphics. The dimensioning, section cutting and annotation functionalities of SMIRT DieShop are also available in the NC programming environment allowing the machinist to easily analyze the work piece. All SMIRT products use the same, easy to use graphical interface ensuring no data is lost when communicating between the machining department and other company departments.

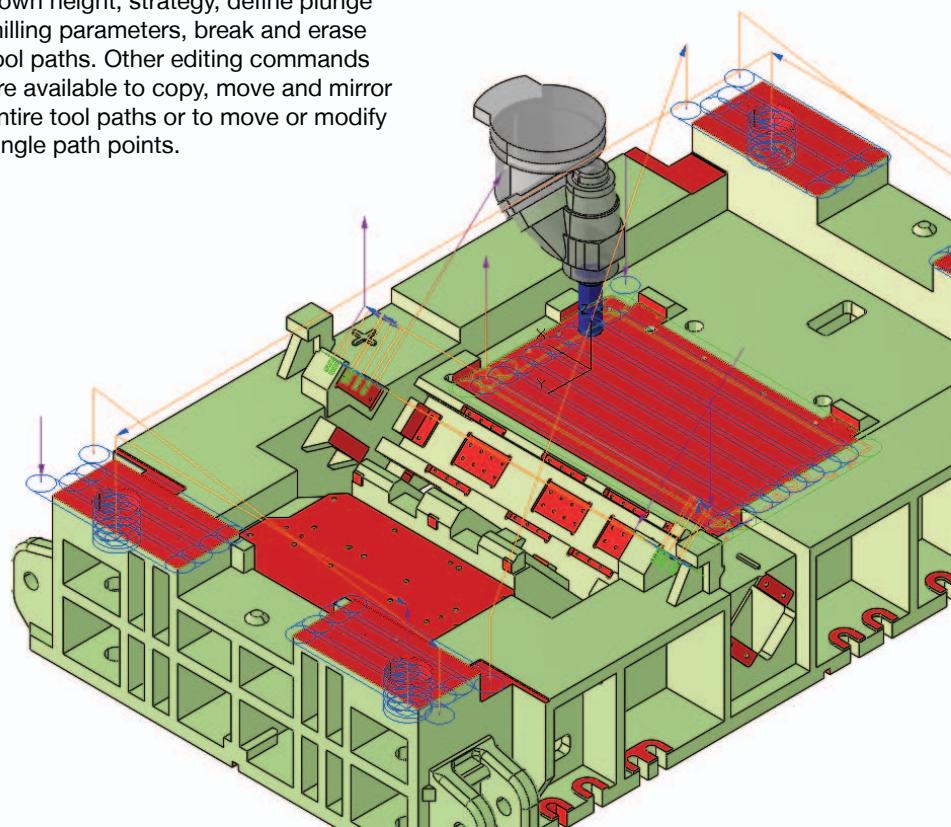
#### User friendly milling in all directions

Milling a planar face with SMIRT DieNC is very easy; simply select the face to be machined, choose the tool and the mouse cursor is transformed into the cutter, scaled to actual dimensions. The machinist can move the cutter “free-hand” over the surface or choose advanced constraints to better control the milling operation. Special constraints can be activated to follow vertical walls, execute planar profile milling, set the tool path overlap and control the tool motion direction. If an angled face is selected, no additional

work is required as indexing heads are managed and the correct milling plane is automatically set.

#### Powerful milling / editing techniques

Special milling methods are available to machine pockets, slots, hole diameters or entire surfaces. Stock material can be defined on all tool paths in the Z direction and on the side walls. Editing tools can be used to set the step-down height, strategy, define plunge milling parameters, break and erase tool paths. Other editing commands are available to copy, move and mirror entire tool paths or to move or modify single path points.



industry accepted solution

short learning times

multiple CAD source import

simple, intuitive user interface

‘drag & drop’ toolpath technology

automatic hole drilling

indexing head management

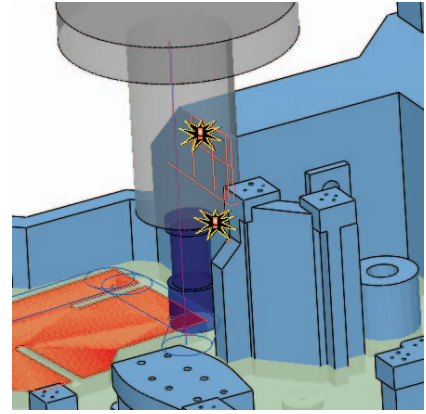
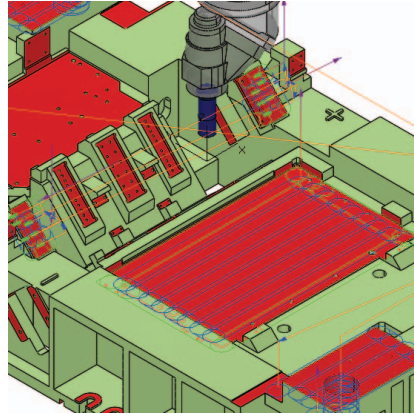
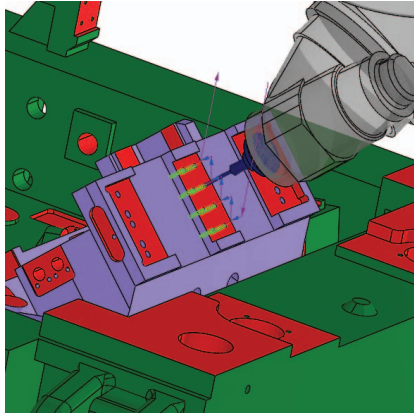
real time collision checking

efficient toolpath editing

toolpath animation

customizable database

The real time collision check, on the tool, tool holder and machining head provide collision free tool paths.



#### Real time collision check

Collision checking (tool, tool-holder and head against the work piece) is performed while creating the tool path on every cutting or rapid movement and the user defined retract strategies can be applied to the linking movements between any tool path type. If a collision is detected, an alert flag is displayed and the interference is highlighted to allow the user to make the relevant changes.

#### Powerful drilling hole collection

Drilling holes can be collected and classified by SMIRT DieNC with drilling methods automatically applied from the user defined data base. Hole collection can be performed fully automatically or manually by selecting single holes or faces for retrieval.

#### Efficient drilling paths

After drilling holes are collected, the tool paths are created efficiently by grouping the drilling operations by tool. All holes drilled with a selected tool are executed regardless of the drilling direction.

#### Safe drilling paths

The drilling paths created by SMIRT DieNC are always checked for collision. All drilling operations that generate a collision are moved to a special list. This gives the operator the option to change the tool set-up in order to correctly drill them without any collision. Additionally, retract strategies and distances can be defined by the user to improve the machining safety.

#### Advanced animation

Toolpath simulation is available for both milling and drilling operations. The animation can be controlled using speed parameters along with the ability to perform a step by step display. A consistent link is created with the post processed file so that it is possible to track the graphical position of the tool with the corresponding line in the post processed file.

#### Data base

The user friendly and intuitive SMIRT NcUtil is provided together with SMIRT DieNC to allow the user to graphically define and manage the data base for tooling, tool holders, drilling methods, machines and machining heads.

The SMIRT way to get the job done

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