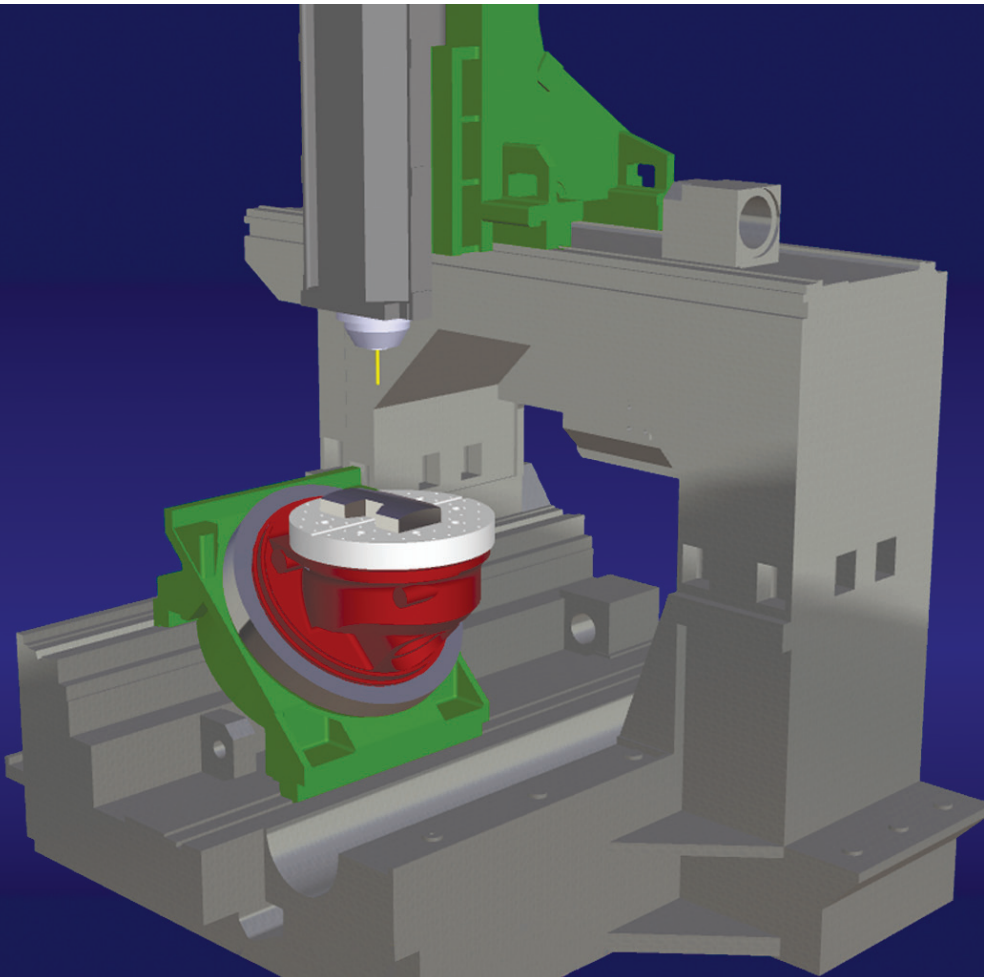# NC MACHINE SIMULATION
Datasheet

DELMIA NC MACHINE SIMULATION: SIMULATION OF NC MACHINE TOOLS

NC PROGRAMMERS BENEFIT FROM FULL ASSOCIATIVITY WITH V6 PRODUCT DESIGNS AND POWERFUL MACHINING AUTOMATION CAPABILITIES WHICH CAN DRAMATICALLY REDUCE NC PROGRAMMING AND PROGRAM OPTIMIZATION TIME.

DELMIA NC Machine Simulation (NMS) enables NC programmers to perform virtual NC program validation, giving programmers the ability to control and simulate machine tool motions, along with material removal, using either the NC tool path or post processed NC code.

DELMIA NC Machine Simulation ensures the NC programmer delivers high quality and optimized NC programs by finding potentially damaging collisions, excessive non value-added machine motion, out of travel machine motion or wrong material removal.

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DELMIA V6 MACHINING

Automatic mounting of NC assembly and machine setup validation

Users can position the NC assembly (workpiece, fixtures and design part) at the correct location on the NC machine in a single step. Interactive reachability analysis provides easy validation of the machining setup.

INTEGRATED AND SIMULTANEOUS SIMULATION OF NC MACHINE MOTIONS AND MATERIAL REMOVAL BASED ON NC TOOL PATH AND NC CODE

NC machine simulation based on the NC tool path helps users to validate programmed tool paths by identifying erroneous and redundant machine motions upfront, quickly leading to the generation of high quality NC operations. It also enables the user to check and validate the quality of material removal. The NC programmer can generate and validate NC code as a final "buy-off" before it is used in the shop-floor.

CHECKING TRAVEL LIMITS OF THE MACHINE TOOLS

Axis limits can be displayed during simulation, which provides early feedback to the user regarding suitability of the selected NC machine to complete the program without exceeding limits.
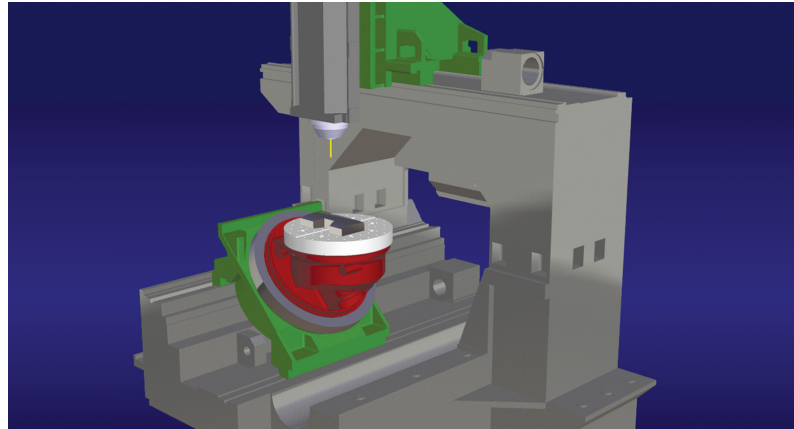
PRODUCT HIGHLIGHTS

• Delivers critical workflow support for the NC programmer

• Extends the reach of DELMIA V6 Machining solutions to more complex machining scenarios

• Users do not need to stop the simulation when collisions are detected. Instead, they can capture the details in a report and quickly "jump" to the part of the program where the collision occurred to make the necessary adjustments

• Validation through simulation of the post-processed ISO code for milling, turning and mill-turn machines

• Support for part transfer and tool change activities

• Generation of a "Fault List" which can be analyzed at the end of a simulation
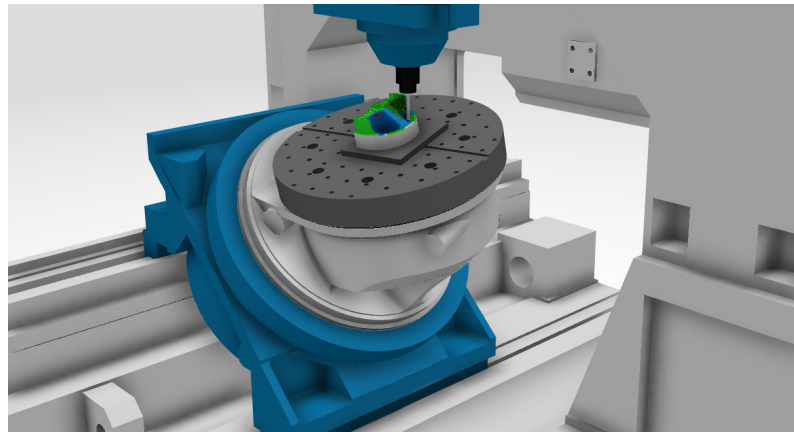
• Collision detection

• Cycle time calculation

NC machine simulation that is based on the NC tool path helps users to validate programmed tool paths upfront, leading to the generation of error free NC operations quickly.

Axis limits can be displayed during simulation, giving feedback to the user regarding suitability of the selected NC machine to complete the program without exceeding limits.

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