



CATIA PLM Express

CATIA - Advanced Multi-Axis & Pocket Machining

De facto standard for complex aerospace part machining with state of the art milling technologies

It is essential to quickly and truthfully respond to customer's needs in today's global environment. Therefore, companies need to produce the most complex parts quicker than ever, optimize machine tool usage, while producing finished parts with the highest quality.

Overview

The CATIA Advanced Multi-axis and Pocket Machining option is the all in one reference milling option that enables machining of the most complex parts, using 2.5-axis to 5-axis and advanced aerospace multi-axis processes. NC programmers benefit from full associativity with CATIA design parts and powerful machining automation capabilities to drastically reduce NC programming and machining time.

Customer Benefits

- All-in-one milling option
- Best in class surface machining quality, faster machining time and ensured collision free tool paths
- Drastic reduction of machining operations and NC programming time savings
- Especially for multi-pocket parts (programming is up to 8 times faster with 75% fewer operations)
- Through-machining process automation
- Ultra-large NC program management and ultra-fast computation thanks to 64-bit support
- Seamless design-to-manufacturing process with manufacturing features recognition and full associativity in the event design changes are made
- Detailed analysis of the machined part and Multi-axis analysis of remaining material

Key Capabilities

Full set of high-end 2.5-, 3- and 5 axis milling and drilling operations

for accurate tool path definition, including support of high-speed milling technology:

- Advanced machining strategies such as 5-axis, flank contouring, 5-axis helix machining for turbo-machinery parts, and Global and automatic machining strategy for multi-cavity parts
- Several 5-axis contouring and sweeping strategies such as multi axis sweeping, contour driven, isoparametric, curve machinind and dedicated tube machining operations
- Multi-axis machining of multiple surface with full collision avoidance
- 3X powerful roughing and finishing strategies including concentric, constant chip-removal machining, trochoidal motion, automatic corner radius and 4X sweeping
- 2.5X roughing, surfacing, latest pocketing strategies, outline shaping, axial cycles such as helicoidal and thread milling, point to point cycles, engraving, etc.
- Sweepings with various strategies (parallel plans, parallel to a curve, with constant z, many strategies to manage the step over)
- Full automatic or manual finishing rework
- Automated detection and reworking of non-machined areas in roughing or finishing

Powerful automation capabilities for efficient NC programming:

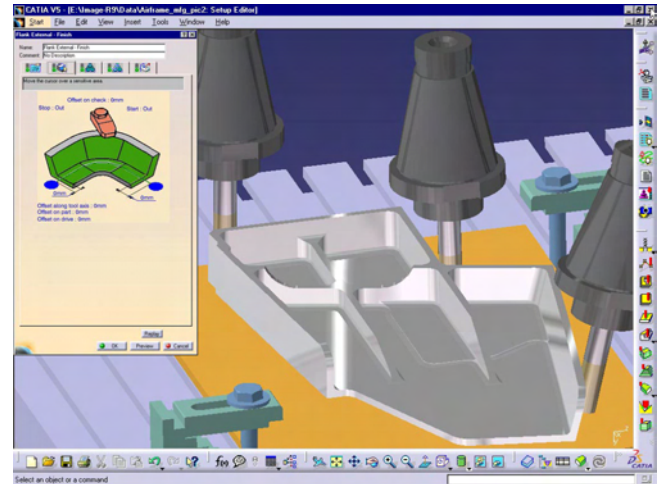
- Capitalization of already defined processes thanks to machining process templates
- Automatic sequencing, user defined features, etc.

Accurate verification of the tool path including simulation of material removal and analysis of remaining material in photo mode (with full tooling fixture and tool holder collision checking)

NURBS output for five axis machining

Management of a broad range of tools

(conical tools with positive or negative cutting angles, groove cutter etc.)



Screen capture of CATIA - Advanced Multi-Axis & Pocket Machining

Native retrieval of external files for immediate machining

Automatic generation of the manufacturing documentation that includes the machining phases, tools, machine and the cutting parameters

Visit us at www.3ds.com/my-catia-plm-express

About Dassault Systèmes

a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 90,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing and ENOVIA for global collaborative lifecycle management, including ENOVIA VPLM, ENOVIA MatrixOne and ENOVIA SmarTeam. Dassault Systèmes is listed on the Nasdaq (DASTY) and Euronext Paris (#13065, DSY.PA) stock exchanges. For more information, visit <http://www.3ds.com>

CATIA, DELMIA, ENOVIA, SIMULIA and SolidWorks are registered trademarks of Dassault Systèmes or its subsidiaries in the US and/or other countries. Copyright Dassault Systèmes 2002, 2006. All rights reserved. IGRIP®, QUEST®, IGRIP®, ULTRAARC®, ULTRAPAINT®, ULTRASPOT®, VIRTUAL NC® are registered in the US Patent and Trade Mark Office by DELMIA Corp. INSPECTTM is owned by DELMIA Corp.

