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ESPRIT Multitasking

ESPRIT provides a natural workflow with an extensive capacity for programming, optimization and simulation of multifunction, multitasking, and multichannel millturn machines. Supporting any machine configuration and size, ESPRIT is the right choice for companies in a wide range of industries from aerospace and power generation to micro machining in the electronics and medical sectors. With a powerful suite of machining cycles combined with advanced process synchronization, program optimization, accurate on-screen machine simulation, and edit-free G-code, ESPRIT will utilize the full capacity of the machine tool.

Milling on a Lathe, Turning on a Mill

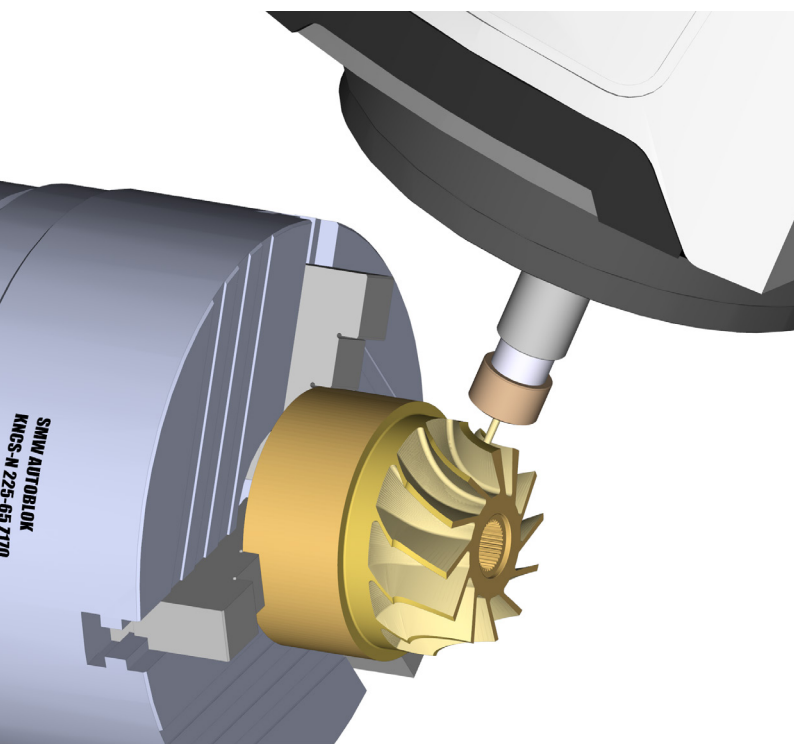
With ESPRIT's Modeless Programming™, combine traditional milling and turning cycles, freeform 3-axis and 5-axis machining, on-machine probing, and part handling cycles in any order, utilizing any table, head, turret or spindle available on the machine. The process plan for a part is maintained separately from the program as run on the machine, so ESPRIT will automatically adapt the process plan to the new situation reflecting any changes to the setup or machine. With Machine Swap there is no reprogramming when moving from prototype to production or from machine A to machine B due to shop scheduling.

Adaptive Machining

Adaptive machining cycles provide great flexibility to utilize the full capability of the CNC machine. With a single user interface, program any cutting cycle using any combination of channel, turret and spindle. Use ESPRIT's high-speed machining cycles, ProfitMilling and ProfitTurning, for shorter cycle times, improved surface quality and longer tool life. Take advantage of rotary machining cycles to overcome limited X-axis stroke, advanced turning cycles with multi-function tools, and extensive drilling options with part and/or tool spinning on and off-center. ESPRIT automatically updates your programs in real time as you make changes to tooling, turret and/or channels.

Synchronized Multichannel

ESPRIT automatically synchronizes machining cycles as you create them, with manual synchronization available for advanced program optimization. As a result, cycle times on the machine are minimized and the full capacity of the machine is utilized. Use sequential mode to optimize cycle times and synchronize the machining cycles for short runs of a single workpiece. Accomplish maximum throughput in parallel mode, where two parts are cut concurrently using the main and sub spindles. When cutting with two or more tools simultaneously on the same workpiece a master channel is chosen for control of the shared spindle or rotary axes. The result is a complete, optimized program that synchronizes the machining cycles with workpiece handling and setup changes including bar feed, reposition, cut off, eject, transfer, and rechucking.



Machine-Aware Multitasking

ESPRIT uses a digital twin of the CNC machine for setup, programming, optimization, and simulation. This awareness and knowledge of the machine's capabilities and limitations powers ESPRIT's most advanced features from high-speed machining to post processing, simplifying the programming process while utilizing the full capability of the machine. With machine awareness, CAM programmers can make better choices and see improved machine performance.



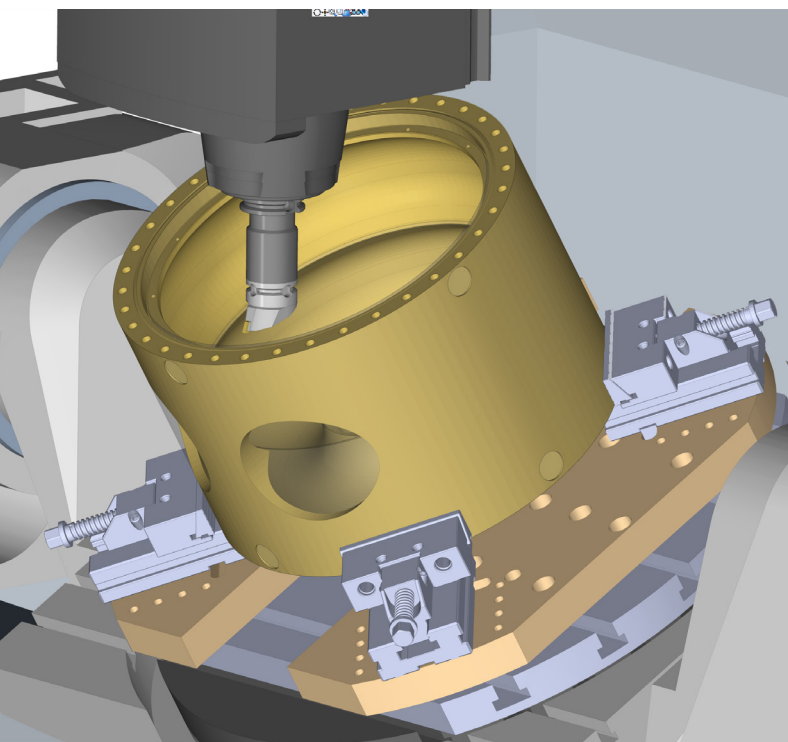
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Full Machine Simulation and Verification

All the multitasking action of the machine is displayed in real time, providing an incredibly accurate animated view of the entire machining process including the synchronized motions of all the machine's components; cutting tools, turrets, spindles, heads, steady rest, and tailstock. Start a simulation at any point in the program using ESPRIT's knowledge of the current state of the workpiece and each channel of the machine. Analysis is available to review the details of each cutting cycle while the analytics provide reports for:

- Potential part violation and collisions
- Axes limit monitoring and overtravel detection
- Axes acceleration exceptions
- Channel conflicts in the event of incompatible instructions



Automatic Link Generator

With a great deal of simultaneous action taking place inside a multitasking machine, collisions can be a constant risk. ESPRIT's link generator automatically creates machine optimized, collision-free positioning and rapid moves saving significant time during programming and on-machine prove out. The link generator is indispensable in making sure that all rapid positioning is performed in a safe and efficient manner considering all the tooling, workpiece, and machine components.

Multitasking

Frézovanie

- Komplexné Tradičné Frézovanie 2.5-osé frézovanie, ProfitMilling, plus voliteľné
- C-os indexové a rotačné frézovanie
- Y-os, 3+1, indexové frézovanie
- B-os, 3+2, indexové frézovanie
- 3-tia rotačná os, 3+3, indexové frézovanie

Sústruženie

- Celé Tradičné 2-osé sústruženie, ProfitTurning, zahŕňa:
- Posuv tyče, uvoľnenie súčiastky, a prechytenie súčiastky
- Upínacie klieštiny a čeľuste
- Modulárne zostavy rezných nástrojov s revolverovými blokmi
- Viacnásobné vretená

Viacrevolverové / Viackanálové

- Podpora pre viacnásobné revolverové hlavy a kanály zo synchronizáciou

Luneta

- Podpora pre Lunetu, koník a iné podporné zariadenia

Súbežné Osi

- Podpora pre programovanie súbežných osí

Kontakty na distribútora:

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Vysoko-Výkonné CNC Programovanie

Použitím ESPRIT Digitálneho Stroja: Modelu stroja, emulátora riadenia, parametrov strojov a post procesora, ESPRIT poskytuje výkonné programovanie, presnú simuláciu a voľne editovateľný, pre stroj optimalizovaný, G-kód. ESPRIT CAM systém sa opiera o prvotriednu technickú podporu s cieľom rýchlo začať prácu a udržiavať ju v prevádzke na najvyššej úrovni.