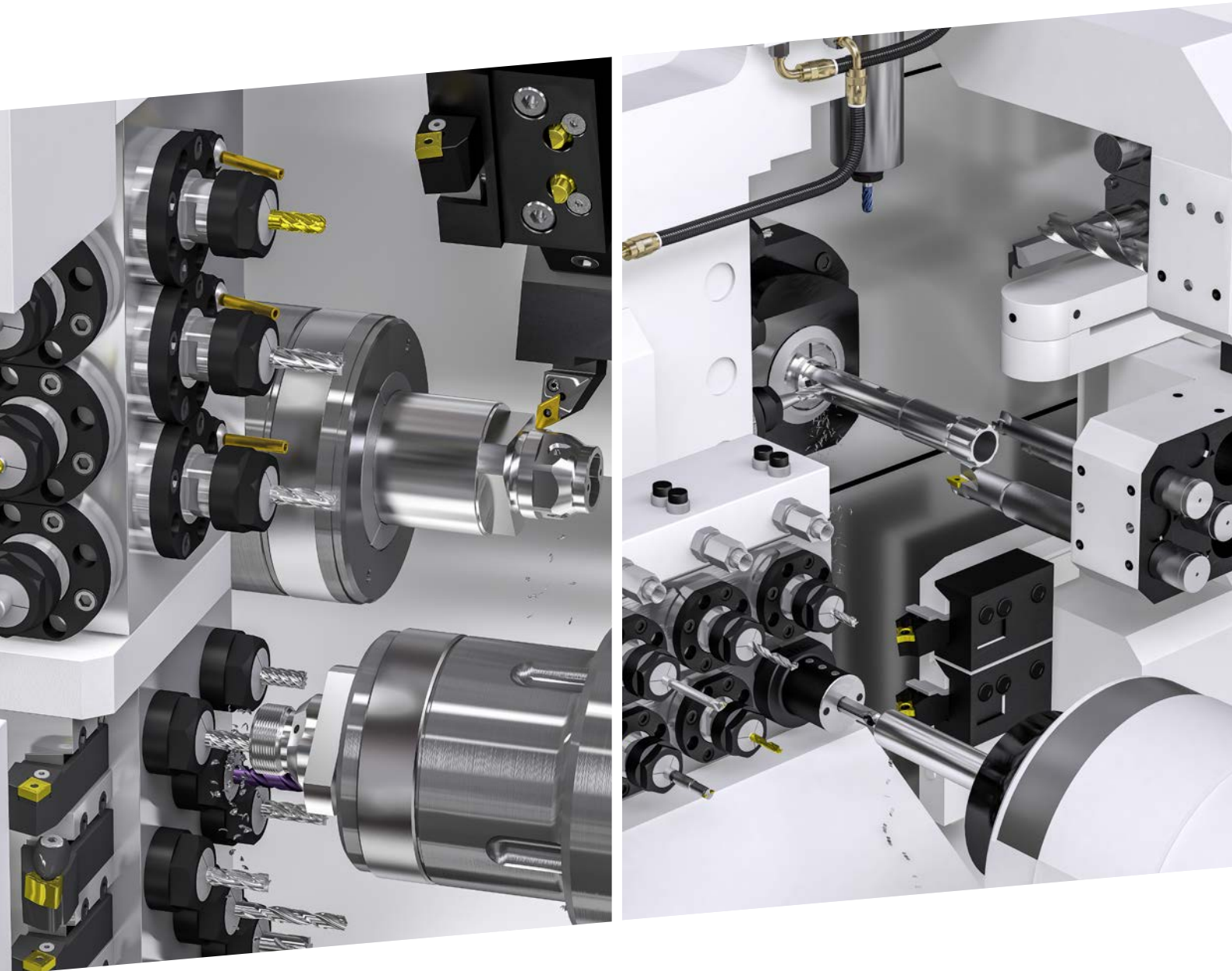


The CAM Leaders in programming
advanced Multi-Channel Mill-Turn
and Swiss-Type CNC-Machines



ADVANCED
MILLTURN



www.solidcam.com



SolidCAM
iMachining – The Revolution in CAM!

ADVANCED MILL-TURN



DMG MORI SEIKI NTX 1000
MACHINING CENTER

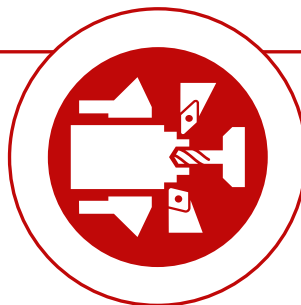
CNC-MASTERCLASS: ADVANCED MILL-TURN

- + Modern Multi-Axis Machining centers and Swiss-Type machines are designed to combine as many milling and turning operations as possible to manufacture workpieces at maximum productivity.
- + Manual CNC programming of sophisticated parts on complex machines, directly at the machine controller is – if at all humanly possible – unproductive, error-prone and expensive.



YOUR MANUFACTURING NEEDS

Efficient CNC-Programming
Max. Capacity Utilization
Short Cycle Times
Fast Turnaround Time
Safe Processes
High Flexibility



SolidCAM MILL-TURN DELIVERS

Fast and Easy Programming
High Functionality
Full Tool-Path Control
Advanced Collision Checking
Visual Prove-Out
Reliable G-Code



MAZAK i400S
MACHINING CENTER

FACE THE CHALLENGE. NOW.



Best-in-class, complete CAM-Solution seamlessly integrated in SOLIDWORKS and Autodesk Inventor



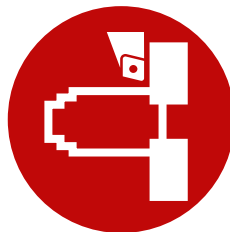
Easy-To-Use and Fast Programming within modern Interface for Maximum Productivity



Supports the most advanced Mill-Turn and Swiss-Type Machines on the Market



Optimize operations in Channel Synchronization Manager for Minimal Cycle Time

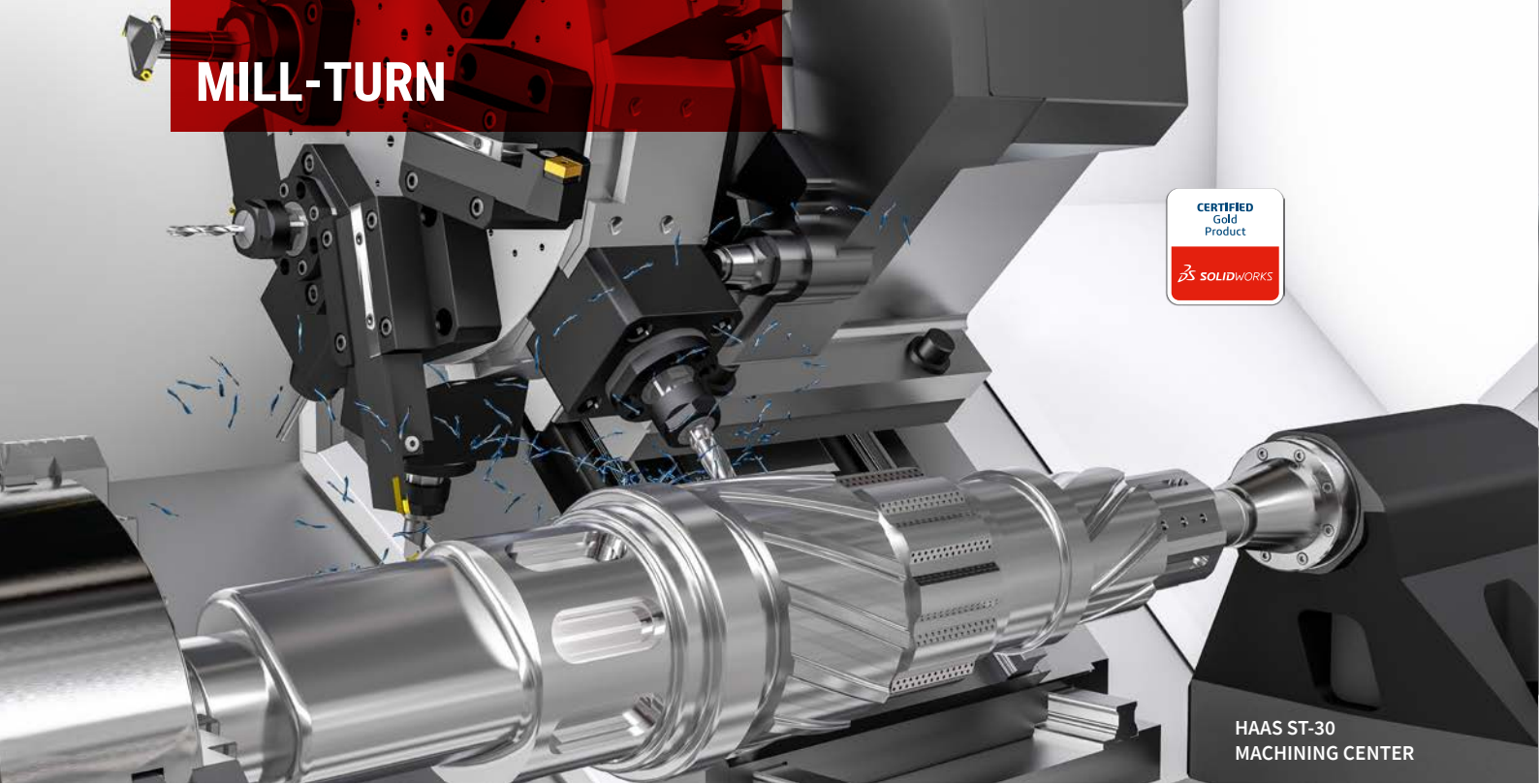


Advanced Collision Control and Simulation showing complete Machine Kinematics and Tool-Path Verification



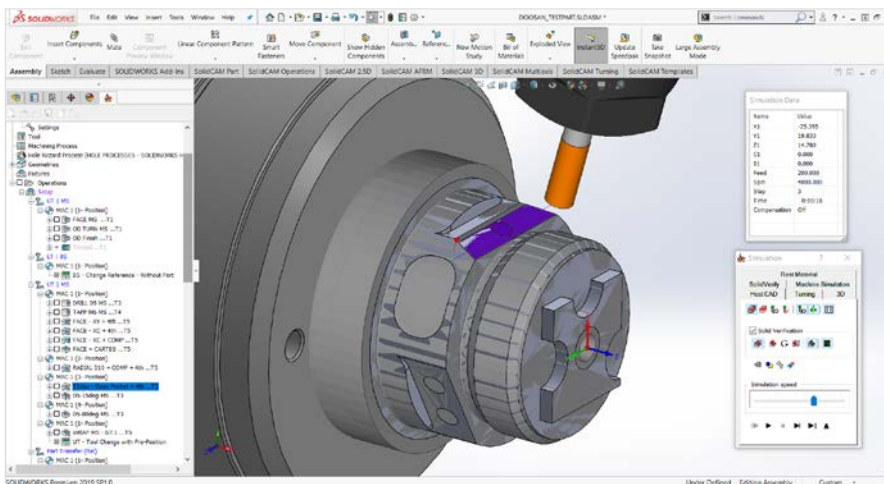
Reliable G-Code Generation supporting advanced Machine Control Cycles and advanced Output Structure

MILL-TURN



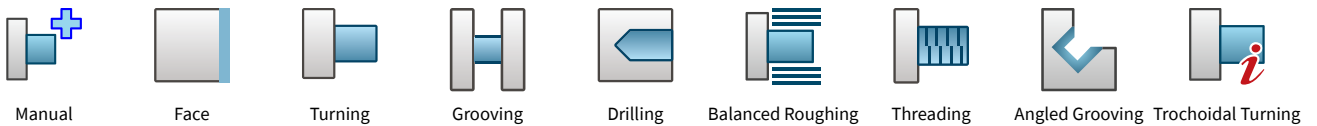
HAAS ST-30
MACHINING CENTER

INTEGRATED. EASY TO USE. COMPLETE.

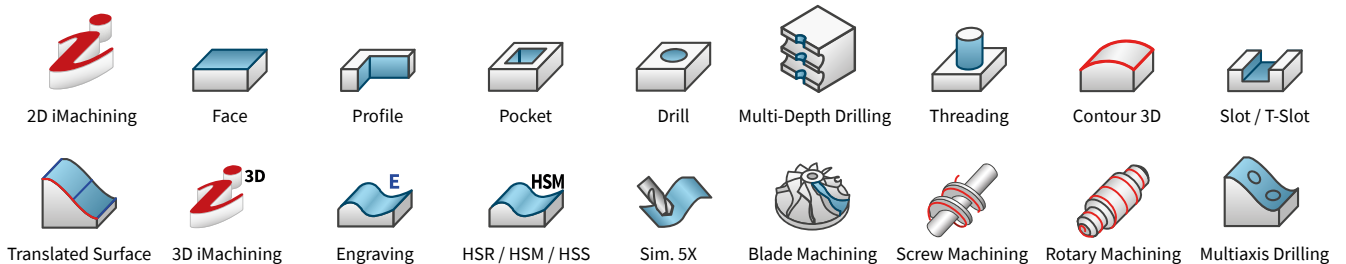


Within the SolidCAM user interface, seamlessly integrated into your SOLIDWORKS or Autodesk Inventor CAD, you program milling and turning operations on main and back spindles, control turrets, tailstocks, steady rests and linear tool carriers. Milling operations include the unique and patented iMachining technology available only from SolidCAM.

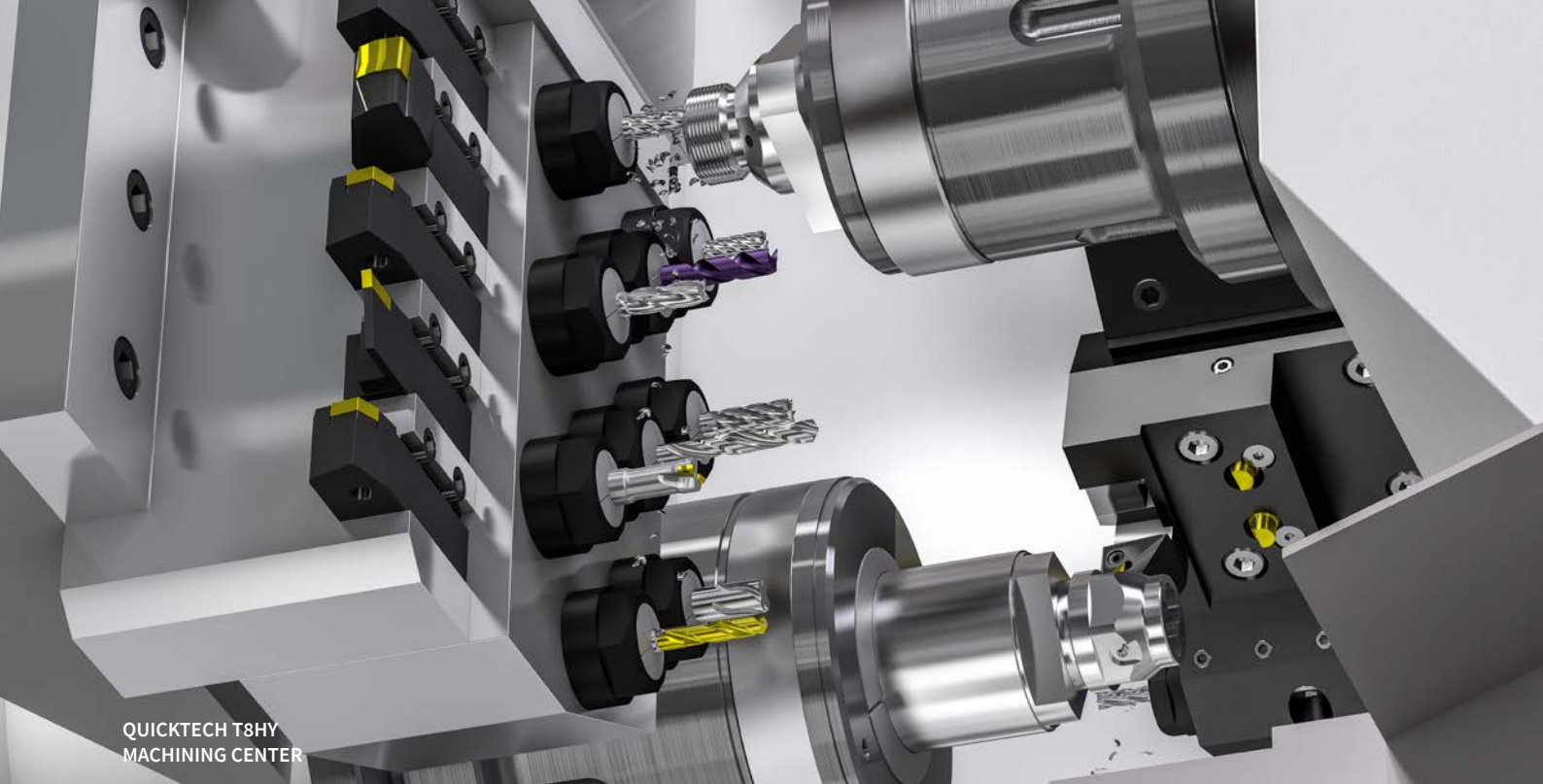
TURNING OPERATIONS



MILLING OPERATIONS

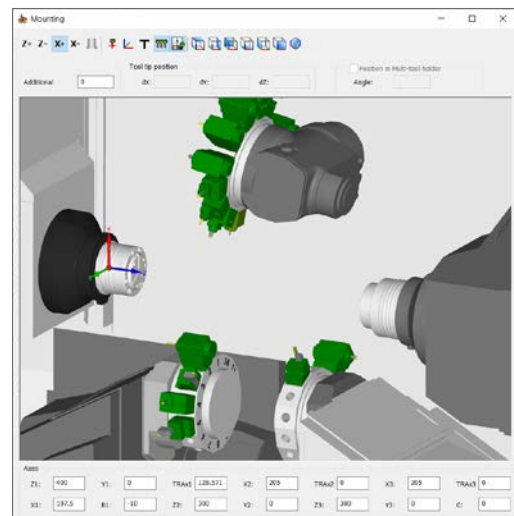
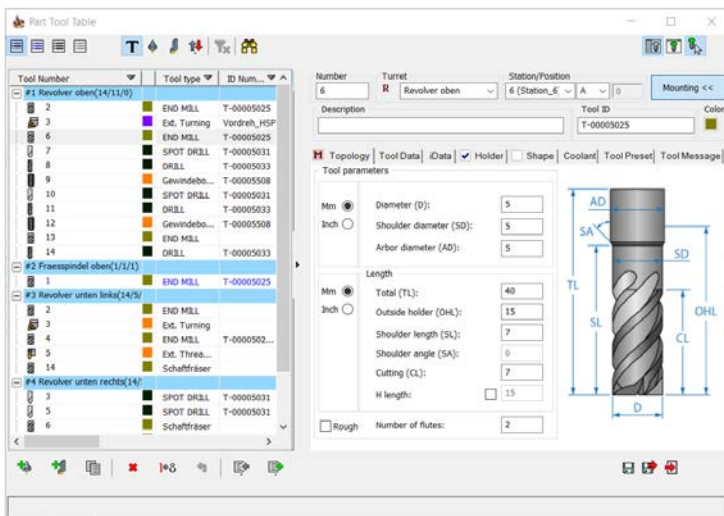


... and many more!



QUICKTECH T8HY
MACHINING CENTER

VISUAL CONTROL. FAST PROGRAMMING.

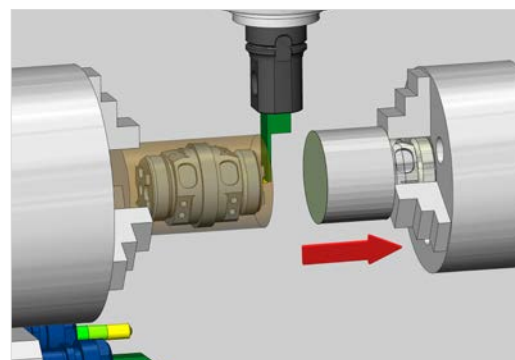


Tool Mounting Assistant

Tool library management made easy: the interactive Tool-mounting assistant for the creation of new tools shows all other tools on the turret, the preview of the machine, the position of the axes and their direction of rotation.

ADVANCED REST MATERIAL HANDLING

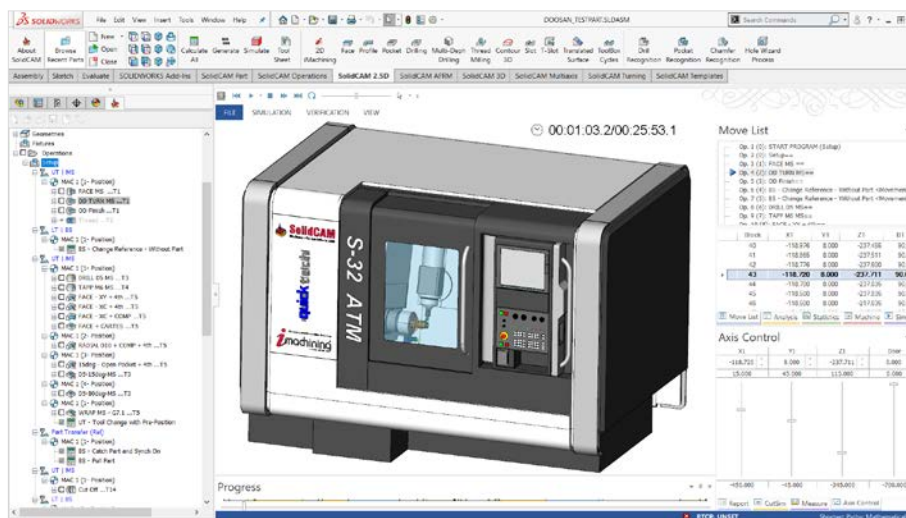
SolidCAM always keeps the stock updated live, within the operations tree, to optimize the tool-path, avoid air-cutting and to achieve minimal cycle time. When the workpiece is transferred from the main to the sub-spindle, the updated stock model is transferred with it. Any subsequent machining on the sub-spindle will detect the stock in the state that it left the main spindle, ultimately providing the most efficient machining.



MILL-TURN | SWISS-TYPE

STAR SR 38 TYPE-B
SLIDING HEAD STOCK MACHINE

SPEED UP YOUR COMPLEX CNC-MACHINES



QuickTech S32 in Advanced Machine Simulation

SolidCAM's Advanced Machine Simulation shows the complete kinematics and all machine elements, providing full tool-path simulation and verification for all your machining operations.

SolidCAM supports the most complex CNCs with unlimited number of axes and channels. We are constantly adding Mill-turn and Swiss-Type machines with various configurations to our machine tool database.



Chiron FZ08MT



Mazak Integrex i-400S



Doosan SMX2600SX



INDEX G200



Citizen D25



Swiss ST 28



STAR SB20-R type G

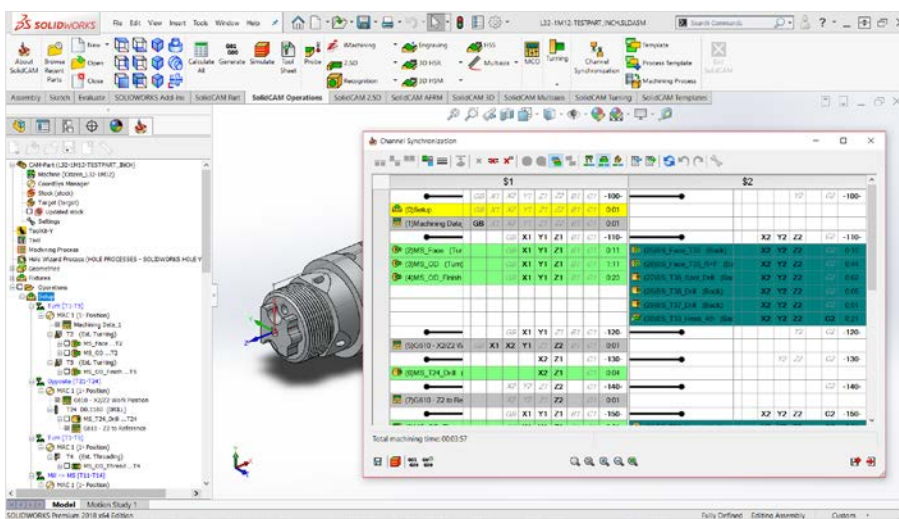


Tsugami B0326E-II



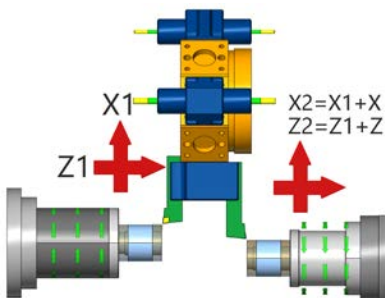
CITIZEN L20E
SWISS-TYPE MACHINE

SHORT CYCLE TIMES. MAXIMUM PRODUCTIVITY.

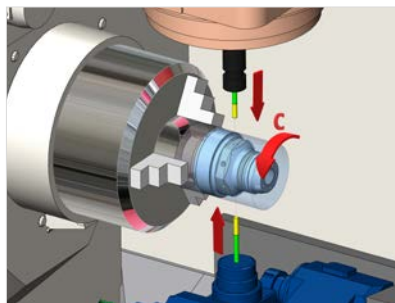


Our easy-to-use Channel Synchronization Manager guides you through the order of operations, shows clashes and assist you to avoid them. It is perfect for synchronizing and optimizing all your machining operations for maximum production output.

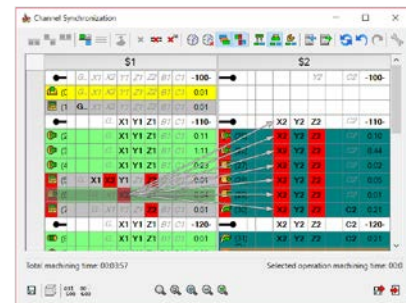
SolidCAM can control unlimited number of channels and supports any amount of machine functions and cutting modes.



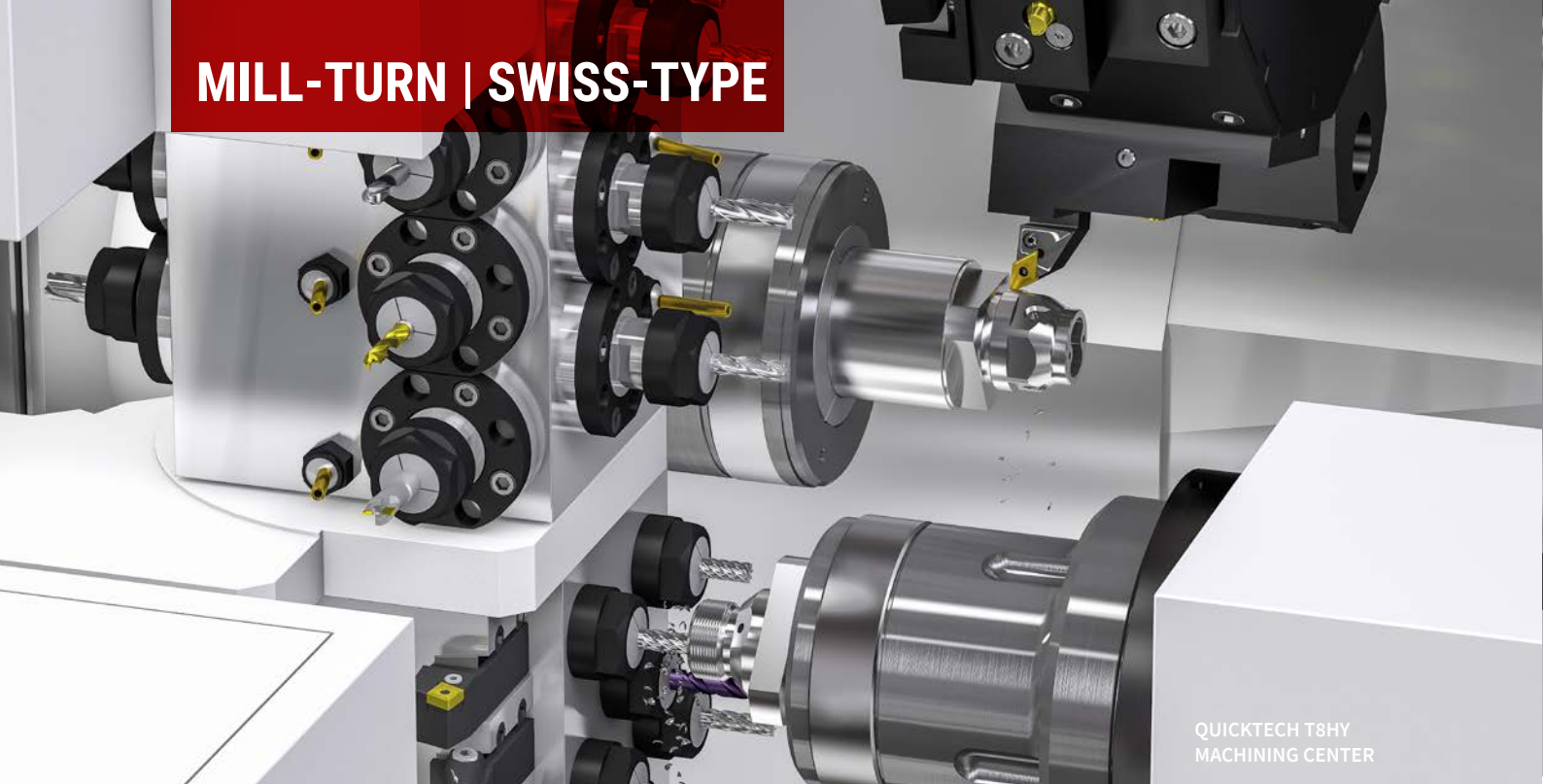
SolidCAM handles three different superimposition modes. A pair of axes can be superimposed one to another, where the slave one follows the master one. For applicable Mill-Turn machines, SolidCAM will automatically detect this mode.



Reduce machining time by sharing axes and drive units. Synchronize two turning operations on different turrets at the same time and under specific conditions use the same spindle or synchronize two milling operations on different turrets on the same rotary axis.



The Channel Synchronization's clash engine displays any issue with logical comments. The intelligent system holds the logic and checks the possibilities of the synchronization taking into an account the machine kinematics.

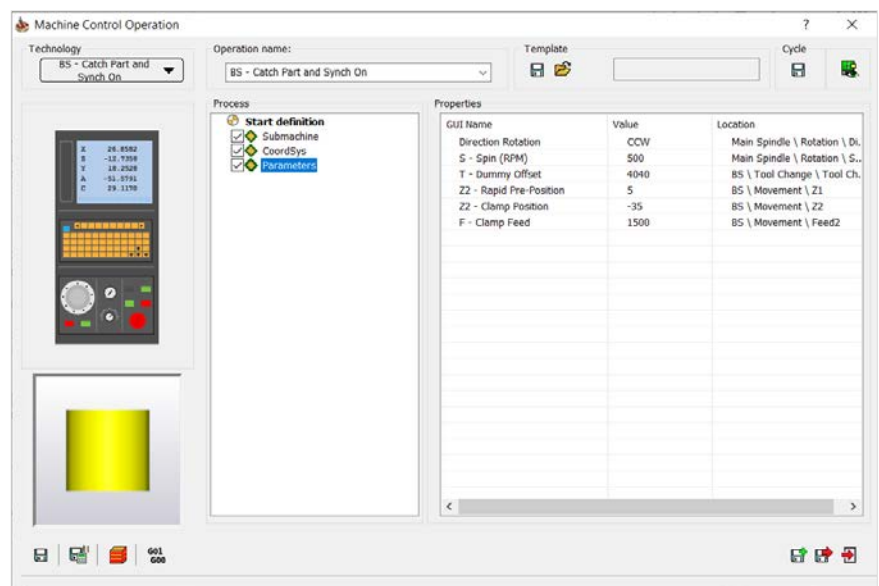


QUICKTECH T8HY
MACHINING CENTER

MACHINE CONTROL OPERATIONS: MCO

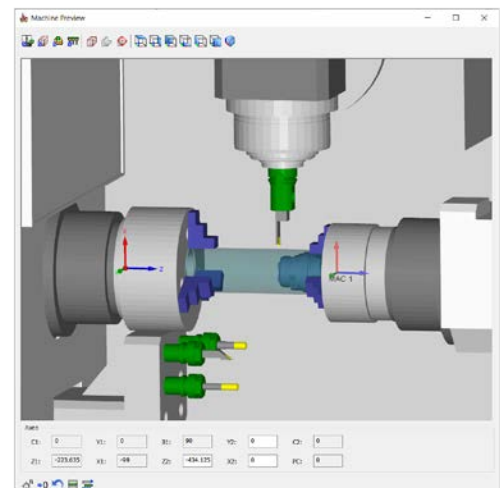
With MCOs you can define the machine actions besides of machining operations, such as:

- Change tool
- Move machine components
- Transfer stock
- Clamp/unclamp fixture
- Program barfeeder
- Control coolants
- Machine mode
- Axes and phase synchronization
- Output any G/M command



PART TRANSFER BETWEEN SPINDLES

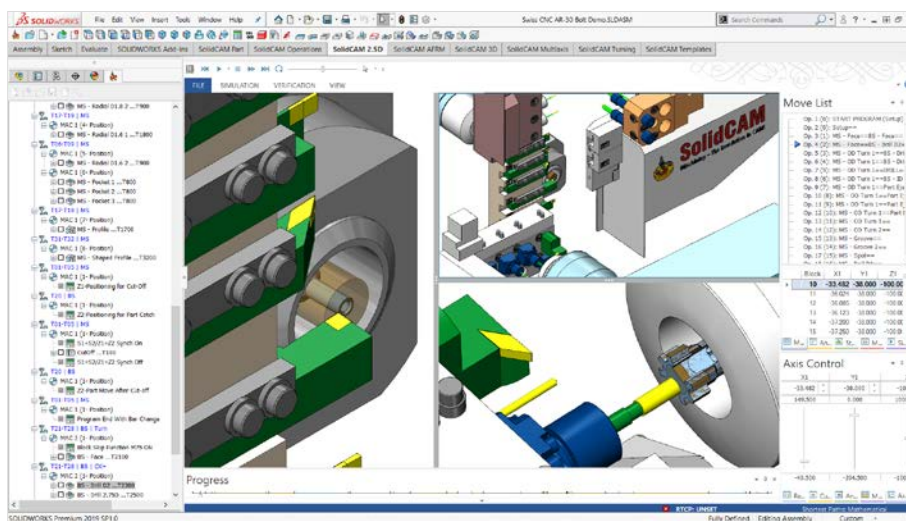
Control the transfer of parts between the main and sub-spindle, using Machine Control Operations. Ready made MCOs provide the best solution for this process.





CITIZEN L20E
SWISS-TYPE MACHINE

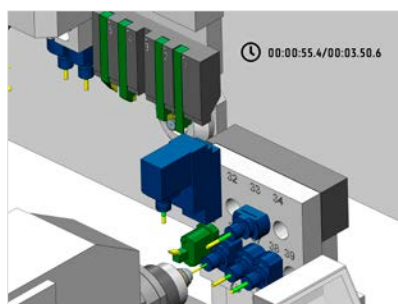
ADVANCED MACHINE SIMULATION



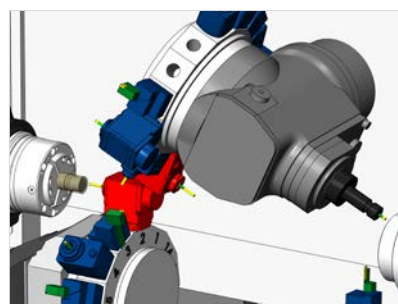
The full machine simulation package can verify and simulate all turning, milling and MCO operations of the actual machine. It provides full collision detection between machine components, workpiece, fixtures, tools and holders.

Visually prove-out the tool-path of your program before physically machining the part and maximize your productivity.

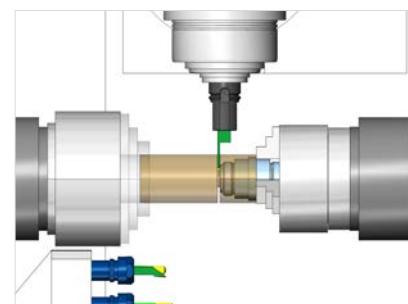
STAR SR38-type B machine simulation in multiple viewpoints mode



Cycle time estimate displayed in simulation

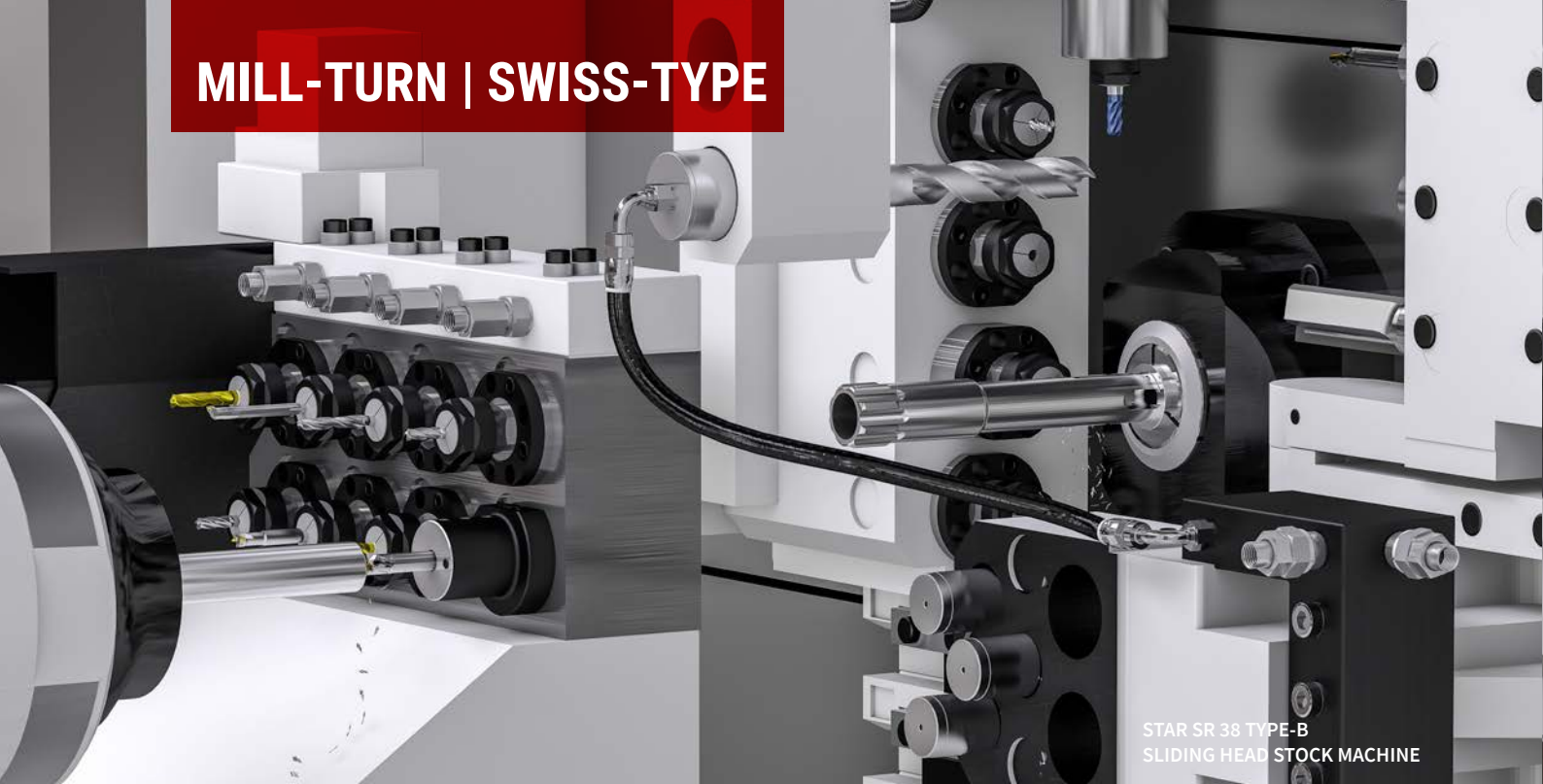


Collision detection



Part transfer: simulating the cut-off process

MILL-TURN | SWISS-TYPE



STAR SR 38 TYPE-B
SLIDING HEAD STOCK MACHINE

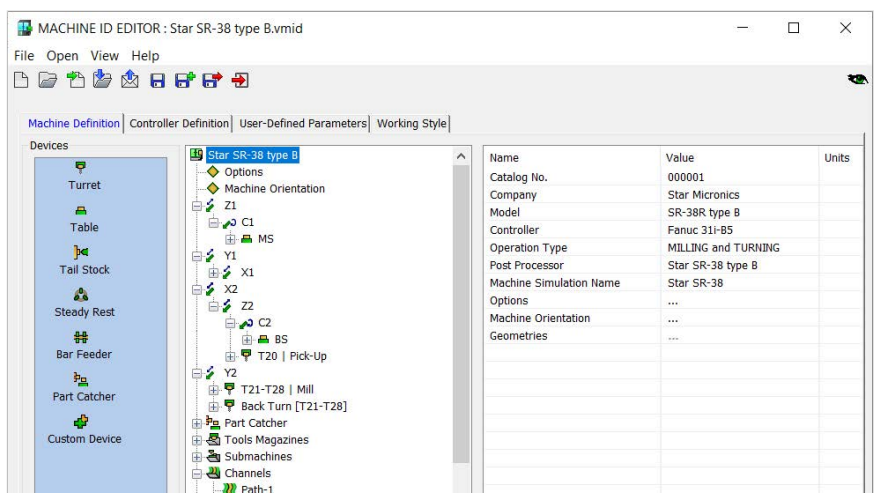
G-CODE POSTPROCESSORS: SIMPLY WOW!

The VMID (Virtual Machine ID) is part of the Post-Processor file and defines the kinematic structure and the controller G-code output options for your CNC-machine.

Using the definitions from the VMID, the customizable GPP (General Post-Processor), written in GPPL-language translates the tool-path into controller-specific G-code output for your particular CNC-machine model.

THE STRAIGHT WAY FROM CAM TO MANUFACTURE

The generated G-code can be sent straight to the CNC-machine without any need for manual editing.



```
%_N_TR_PROFIL3_KanaL1_MPF
;$PATH=/_N_WKS_DIR/_N_SOLIDCAM2018_RADNA
N1 CHANDATA(1)
; ----- KANAL: 1 -----
;SOLIDCAM : 99748 PP:Rev.3.6
;ERSTELLT : 9-MAY-2019 - 19:56:41
;MACHINE : NTX 1000
;WERKSTUECK: SOLIDCAM2018_RADNABE_NTX100
;
N2 WAITM(1,1,2)
R10=0 R11=0 R12=298.565 ;G54 X Y Z
R20=0 R21=0 R22=603.919 ;G55 X Y Z
R29=0 ;G55

$P_UIFR[1]=CTTRANS(X,R10,Y,R11,Z,R12,C4,0
$P_UIFR[2]=CTTRANS(X,R20,Y,R21,Z,R22-R29,
N3 WORKPIECE(,,,"CYLINDER",192,2.5,-150,
;GOTOF ABDA

GROUP_BEGIN(0,"1: Programmkopf",0,0)
N4 WAITM(2,1,2)
N5 TRANS
N6 ROT
N7 DIAMOF
N8 GETD(Z3)
N9 GETD(B3)
N10 G00 SUPA X330. D0
N11 G00 SUPA Z400. Y0. B1=90.
N12 WAITM(3,1,2)
N13 NP_B3_VAR(0,870)
GROUP_END(0,0)
N14 WAITM(4,1,2)
N1 WAITM(5,1,2)
N1 WAITM(6,1,2)
```

DMG Output

```
O0001 ( MAZAK_I400S )
(INTEGREX-1 - 400 S)
(part : MAZAK_I400S)
(created : 9-MAY-2019 )

#800=-458.7 (Work-Offset G54 - Z1)
#801=0. (Work-Offset G54 - C1)
(----- C1)

G21
M901
G92 S2000 R1
G92 S2000 R2
G90 G0 G53 G0 X0. Y0.
G90 G0 G53 G0 Z0.
M108
G90 G53 G0 B0.
M107

G10 L2 P1 X-490. Z#800 C#801
G10 L2 P2 X-490. Z#802 U#803

M902
M312
M302

M1
N1
T001.01 M6
M901
M200
M108
G90 G53 G0 B90.
M107
```

Mazak ISO Output

```
O0010(L32-1M12)
$1
(PROGRAMM-NR.: DCL32-L32-1M12)
(DATE: 9-MAY-2019)

G50 Z[#141-#142]
M52
M6
M9
M346
G0 X[#814+#815] Z-.05
M51

G600

I2L110

(JOB-NR.2)
(MS-FACE)
T0202 Z-.0867 (OD TURNING)
G18
G50 S1500
G96 M3 S300
M97
G0 G99 X1.436 Z-.0867
Z0
G1 X-.0315 F0.003
Z-.08
G0 X1.4359
G97 M96

(JOB-NR.3)
(MS-OD)
G50 S4000
```

Mitsubishi / Fanuc G-Code Output



DMG MORI SEIKI NTX 1000
MACHINING CENTER

AMAZING TECHNICAL SUPPORT. WORLDWIDE.



Online-Support and Ticket-System
with Live-Chat

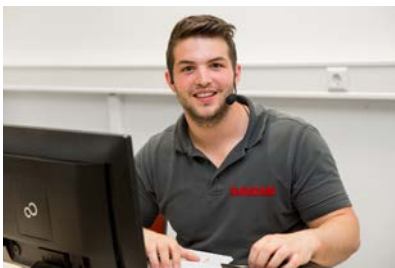
SolidCAM employs a large team of very experienced technical staff, supporting resellers and customers in programming parts and customizing Post-Processors all over the world.

In our technology centers all our Milling, Turning and Mill-Turn technologies are thoroughly checked and can be demonstrated live on our latest CNC machines.

Customers, resellers and participants of our trainings all benefit from this practical experience.

Faster from the CAD model to the finished workpiece.

We live this motto in technical support and in our technology centers – day after day!



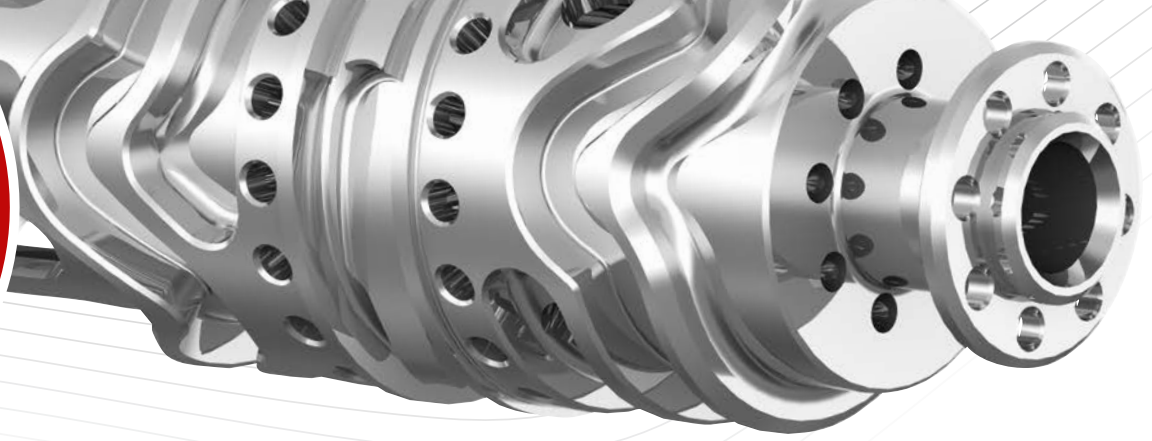
All SolidCAM support and application engineers have a strong technical background as well as CNC and manufacturing experience.



The international Post-Processor Team takes care of customizing the G-Code output to the needs and requirements of your machine tool.



Modern technology and training centers enable us to test, demonstrate and train latest CNC- and CAM technology.



“ My personal goal was to be able to program all CNC machining operations consistently with a single CAM system. The biggest challenge here was to bring the Swiss-type lathes on board. Thanks to the extensive support provided by SolidCAM, that also worked out wonderfully!”

Steffen Rudischhauser | Managing Director
Rudischhauser Surgical Instruments & Implants Manufacturing GmbH | rudischhauser.com



“ What matters to us are the structure and quality of the generated CNC programs that go to the machine, as well as how quickly and easily they can be generated. The service at SolidCAM is unparalleled. The technicians have done a great job with the post-processors for our complex Bumotec machines. And if we ever have a problem, someone from the support team is immediately offering help. These days, that isn't a given; it's unique!”

Stjepan Matacun | Production Manager
Stuckenbrock Medizintechnik GmbH

“ After only two weeks with SolidCAM we had more success than with the previous CAM system after three years. We can now program the most complex workpieces much faster. Creating the tools is much easier and I can already program a part even if the final tool data is not yet completely available. This was not possible in the past.”

Franz Fuchs | CNC & CAM Programming
Hefter Maschinenbau GmbH & Co. KG | hefter.de



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Bangna Nuea, Bangna, Bangkok 10260

Tel : 0-2744-9045
Fax : 0-2744-9049



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