



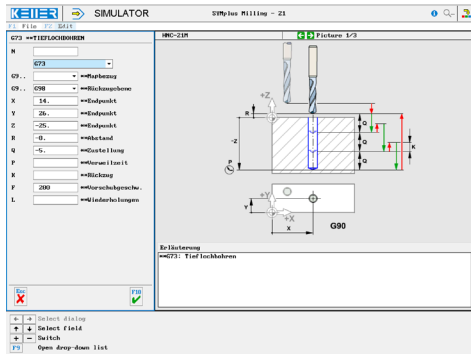
CONTROLS

Control simulator HNC 21M (milling)

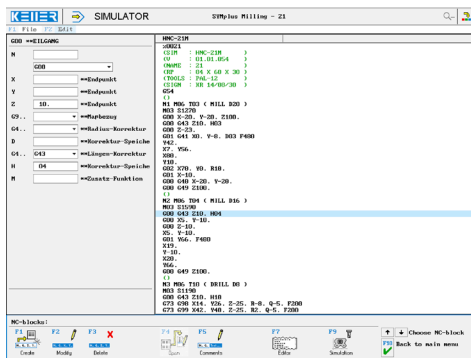


The control related simulator is an additional module for SYMplus. This simulator is used to learn the control system programming. A program generated by a postprocessor can also be edited and simulated.

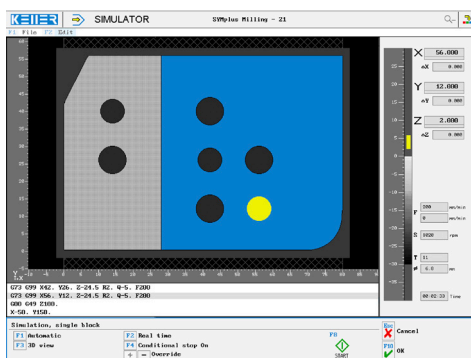
Help pictures and texts (for all input dialogues)



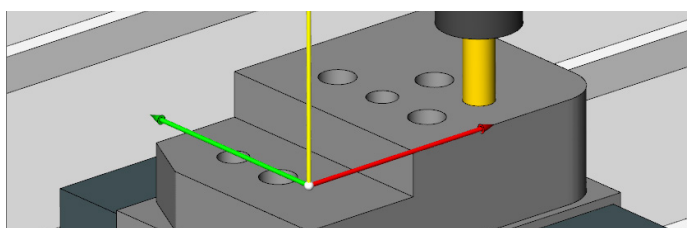
NC editor incl. input dialogue and syntax control



Perfect control due to simulation with position indicator (real time, fast mode, single block with path preview, measurement function, ...)



3D simulation with freely adjustable perspective



COMMANDS/ FUNCTIONS/CYCLES

G00	Rapid traverse
G01	Line
G02	Arc, clockwise
G03	Arc, counter-clockwise
G04	Dwell time
G09	Exact position
G24	Mirroring
G25	End of mirroring
G28	Approach reference point
G29	Return from reference point
G40/G41/G42	Radius compensation
G43/G44/G49	Length compensation
G50	Scaling mode cancel
G51	Scaling mode
G52	Local coordinate system
G53	Rapid traverse machine coordinates
G54...	Workpiece coordinate system
G68	Coordinate rotation
G69	Coordinate rotation end
G73	Deep-hole drilling
G74	Tapping left
G76	Fine boring
G80	Terminate canned cycle
G81	Spot drilling
G83	Countersink
G84	Tapping
G85	Boring
G86	Boring
G87	Back drilling
G88	Special boring
G89	Boring
G90/G91	Dimensional reference
G92	Set zero point
G94	Feed
XYZ	Modal commands
T	Tool call
Comment	Explanations
M	Additional function



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%0021
(RP           : 84 X 60 X 30)
(TOOLS : PAL-12)
G54
( )
N1 M06 T03 ( MILL D20 )
M03 S1270
G00 X-20. Y-20. Z100.
G00 G43 Z10. H03
G00 Z-23.
G01 G41 X0. Y-8. D03 F480
Y42.
X7. Y56.
X80.
Y10.
G02 X70. Y0. R10.
G01 X-10.
G00 G40 X-20. Y-20.
G00 G49 Z100.
( )
N2 M06 T04 ( MILL D16 )
M03 S1590
G00 G43 Z10. H04
G00 X5. Y-10.
G00 Z-10.
X5. Y-10.
G01 Y66. F480
X19.
Y-10.
X20.
Y66.
G00 G49 Z100.
( )
N3 M06 T10 ( DRILL D8 )
M03 S1190
G00 G43 Z10. H10
G73 G98 X14. Y26. Z-25. R-8. Q-5. F200
G73 G99 X42. Y40. Z-25. R2. Q-5. F200
G73 G99 X42. Y12. Z-25. R2. Q-5. F200
G73 G98 X56. Y26. Z-25. R2. Q-5. F200
G00 G49 Z100.
( )
N4 M06 T11 ( DRILL D6.8 )
M03 S1020
G00 G43 Z10. H11
G73 G98 X14. Y40. Z-24.5 R-8. Q-5. F200
G73 G99 X42. Y26. Z-24.5 R2. Q-5. F200
G73 G99 X56. Y12. Z-24.5 R2. Q-5. F200
G00 G49 Z100.
X-50. Y150.
M30

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