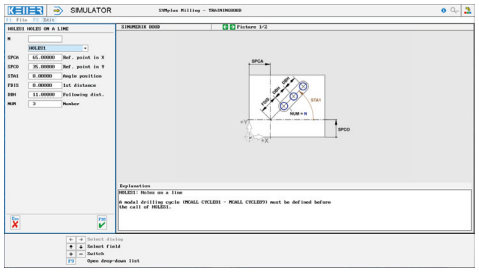
F3 Simulator

CONTROLS

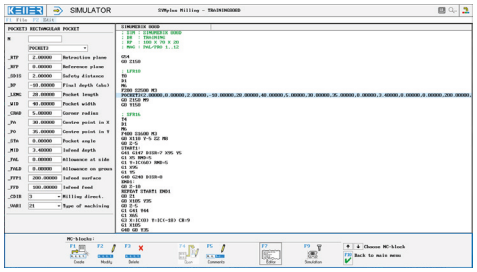
Control simulator SINUMERIK 808D (milling)

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

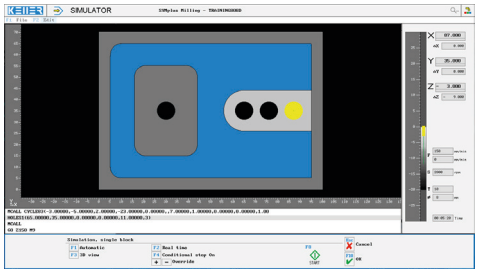
Help pictures and texts (for all input dialogues)



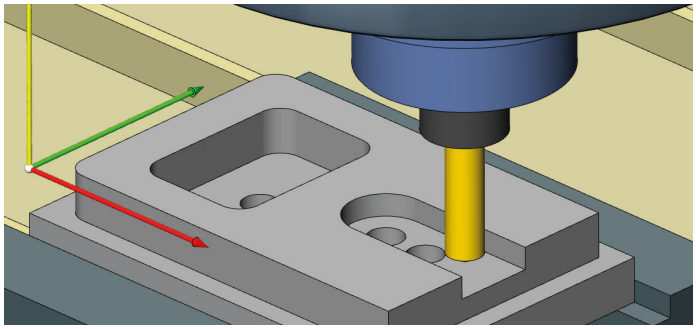
NC editor incl. input dialogue and syntax control



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

G0	Rapid traverse
G1	Line
G2	Arc, clockwise
G3	Arc, counter-clockwise
G4	Dwell time
G17	Plane
G33	Threading
G40/G41/G42	Radius compensation
G53	Positioning in mcs
G54-G57	Zero offset
G60/G64	Exact posit./Smooth. Corners
G75	Approach to fixed point
G90/G91	Exact positioning
G94	Feed per minute
G110/G111/G112	Stipulation of pole
CFC/CFTCP	Feed compensation
Comment	Explanations
MSG	Message
UP-CALL	Sub-program call
LABEL	Set
REPEAT	Program part repetition
T	Tool call
MIRROR	Mirroring
ROT/AROT	Rotation absolute/incremental
SCALE	Scaling
TRANS/ATRANS	Zero offset absolute/incremental
CYCLE81	Drilling/centering
CYCLE82	Drilling/countersinking
CYCLE83	Deep-hole drilling
CYCLE84	Tapping without
CYCLE840	Tapping with
CYCLE85...89	Boring 1...5
HOLES1	Holes on a line
HOLES2	Holes on a circle
LONGHOLE	Long-holes on a circle
SLOT1	Slots on a circle
SLOT2	Circular slots on a circle
POCKET3	Rectangular pocket
POCKET4	Circular pocket
MCALL	Modal deselection
X/Y/Z/F/S/M	Modal commands

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CONTROLS

Example program

```
; SIM : SINUMERIK 808D
; DR  : TRAINING
; RP  : 100 X 70 X 20
; MAG : PAL/PRO 1..12
G54
G0 Z150
; LFR10
T8
D1
M6
F200 S2500 M3
POCKET3(2.00000,0.00000,2.00000,-10.00000,28.00000,40.00000,5.00000,30.00000,35.00000,0.00000,3.400
00,0.00000,0.00000,200.00000,100.00000,3,21,8.00000,,,,4.00000,1.60000)
G0 Z150 M9
G0 Y150
; SFR16
T4
D1
M6
F400 S1600 M3
G0 X110 Y-5 Z2 M8
G0 Z-5
START1:
G41 G147 DISR=7 X95 Y5
G1 X5 RND=5
G1 Y=IC(60) RND=5
G1 X95
G1 Y5
G40 G248 DISR=8
END1:
G0 Z-10
REPEAT START1 END1
G0 Z1
G0 X105 Y35
G0 Z-5
G1 G41 Y44
G1 X65
G3 X=IC(0) Y=IC(-18) CR=9
G1 X105
G40 G0 Y35
G0 Z150 M9
G0 Y150
; SPB08
T10
M6
F150 S2800 M3
G0 X30 Y35 Z2 M8
CYCLE81(2.00000,-10.00000,2.00000,-23.00000,)
MCALL CYCLE83(-3.00000,-5.00000,2.00000,-
23.00000,0.00000,,7.00000,1.00000,0.00000,0.00000,1.00000,0,3,5.00000,0.00000,0.00000)
HOLES1(65.00000,35.00000,0.00000,0.00000,11.00000,3)
MCALL
G0 Z150 M9
G0 Y150
M30
```