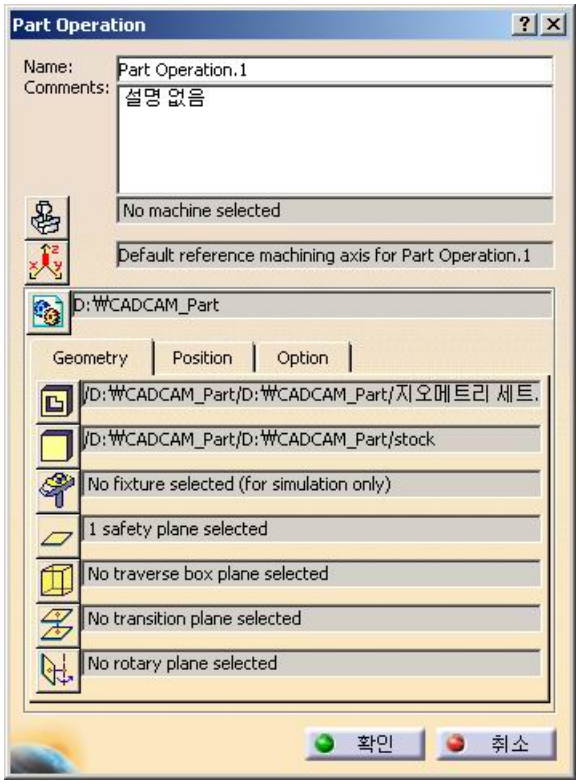
2007.10.29 CAD/CAM CATIA NC Lab.

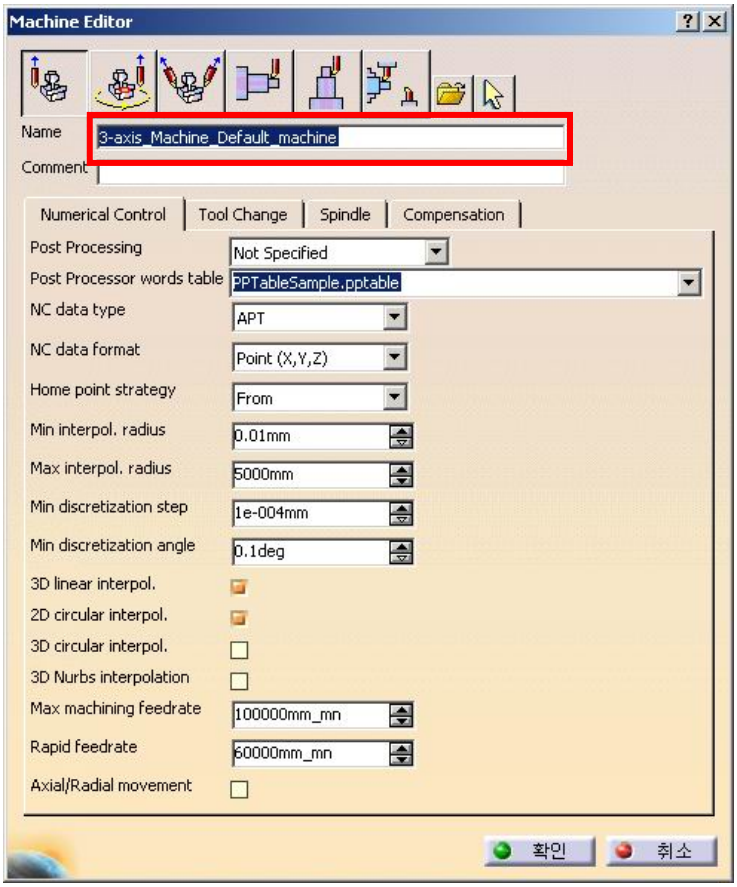
▣ Setting Parameters for CATIA NC Manufacturing Solution

1. Prismatic Machining

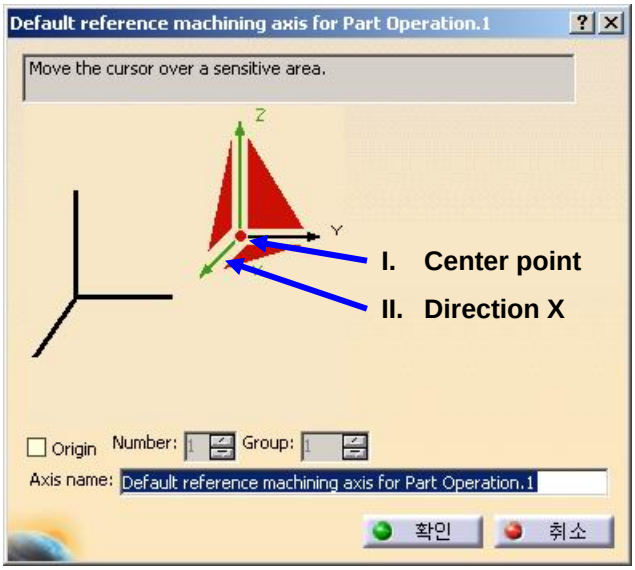
   A. Part Operation Dialog



   i. Machine Editor



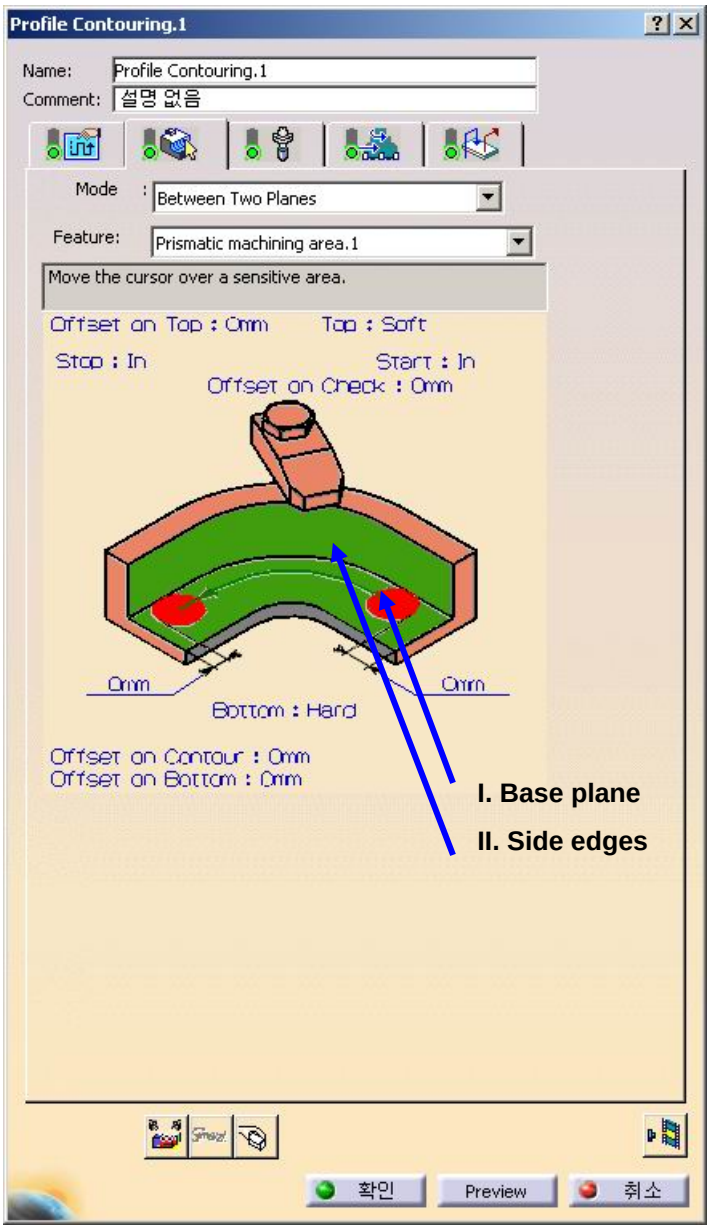
ii. Machining Axis System



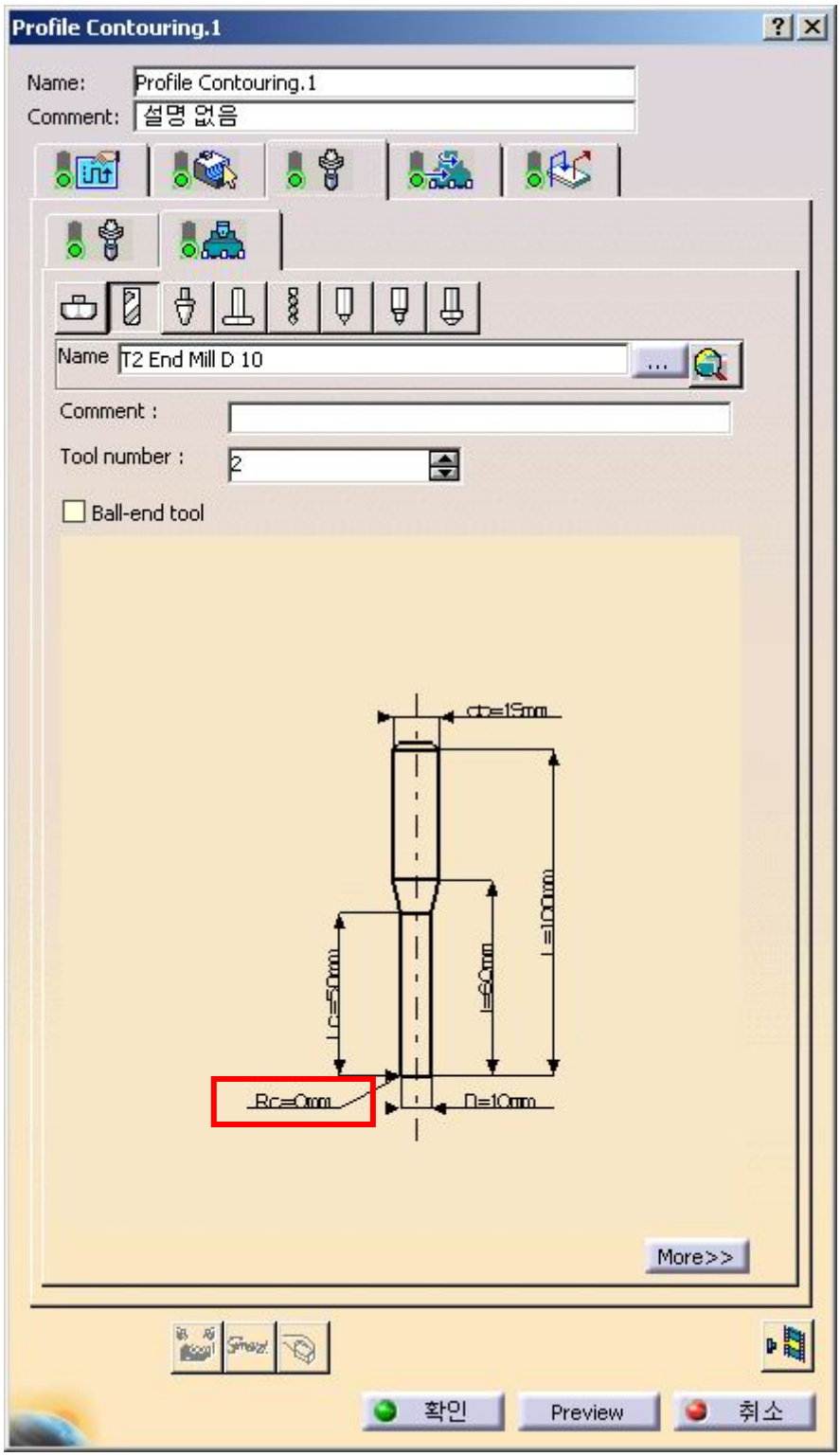
1. Direct Dialog

B. Profile Contouring

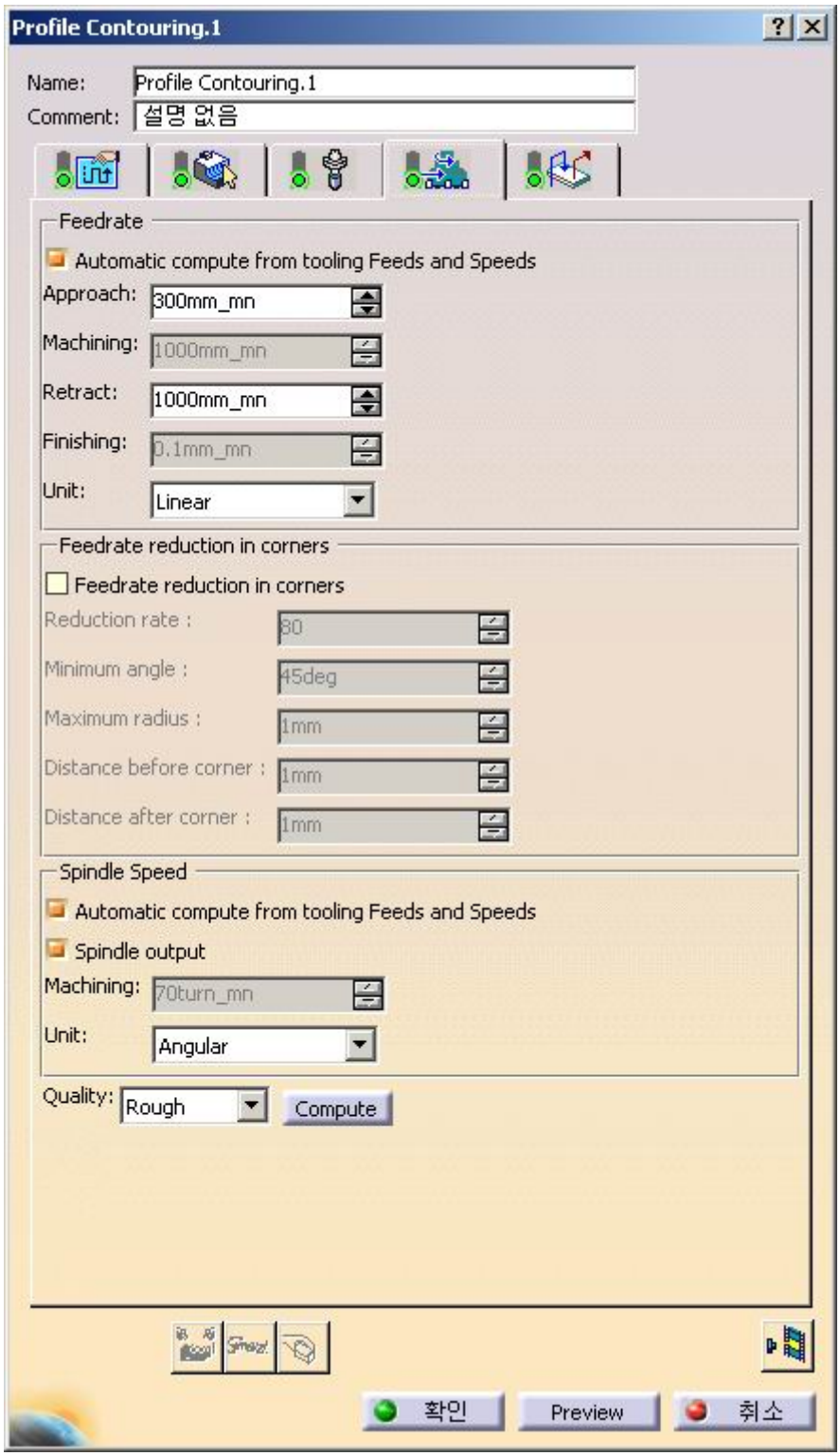
i. Geometry Tab



ii. Tool Tab

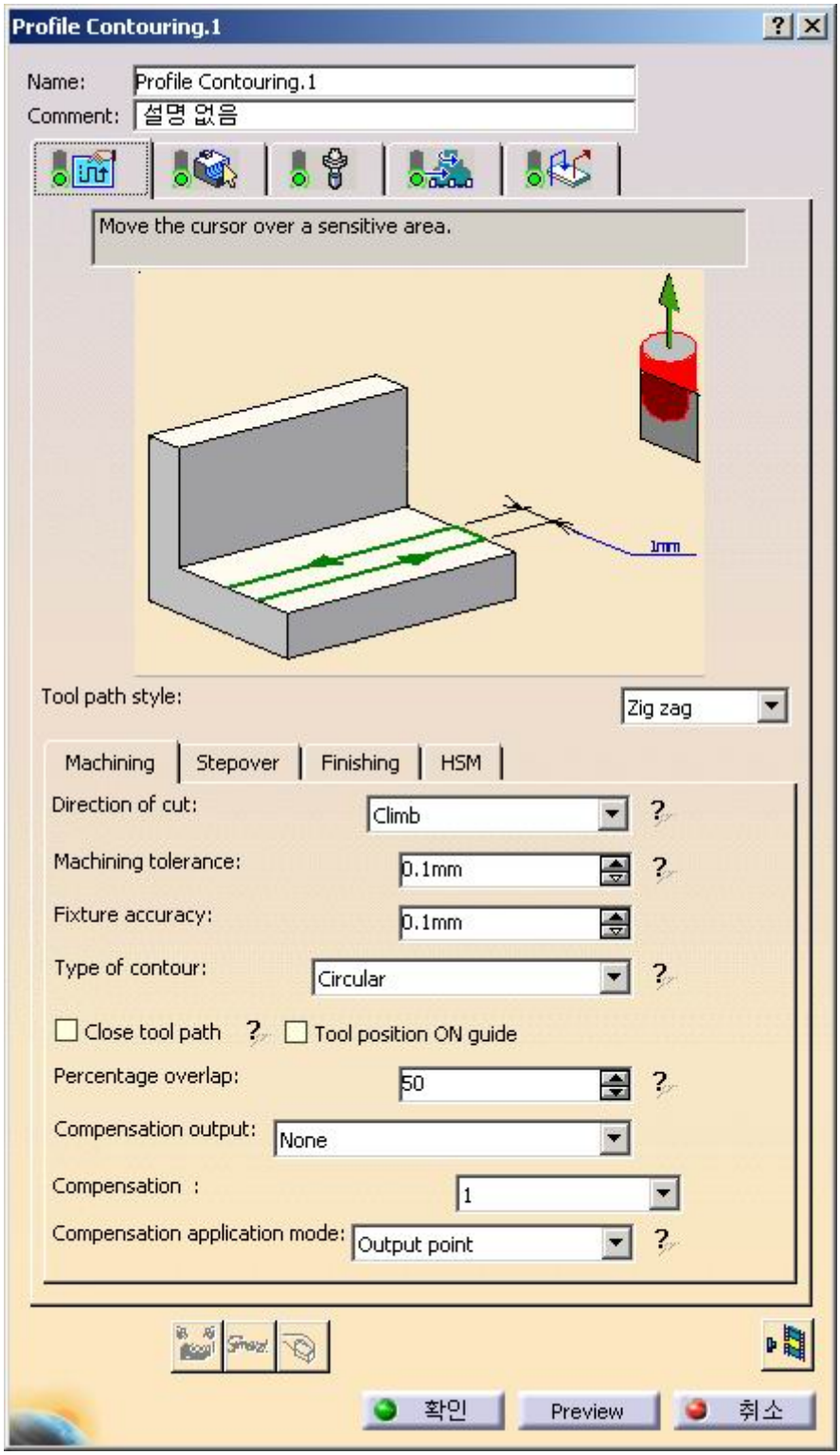

Profile Contouring.1
Name:
Profile Contouring.1
Comment:
설명 없음
Name
T2 End Mill D 10
Comment :
Tool number :
2
Ball-end tool
d=15mm
L=100mm
l=80mm
Lc=50mm
Rc=0mm
D=10mm
More>>
확인
Preview
취소

iii. Feed and Speed Tab

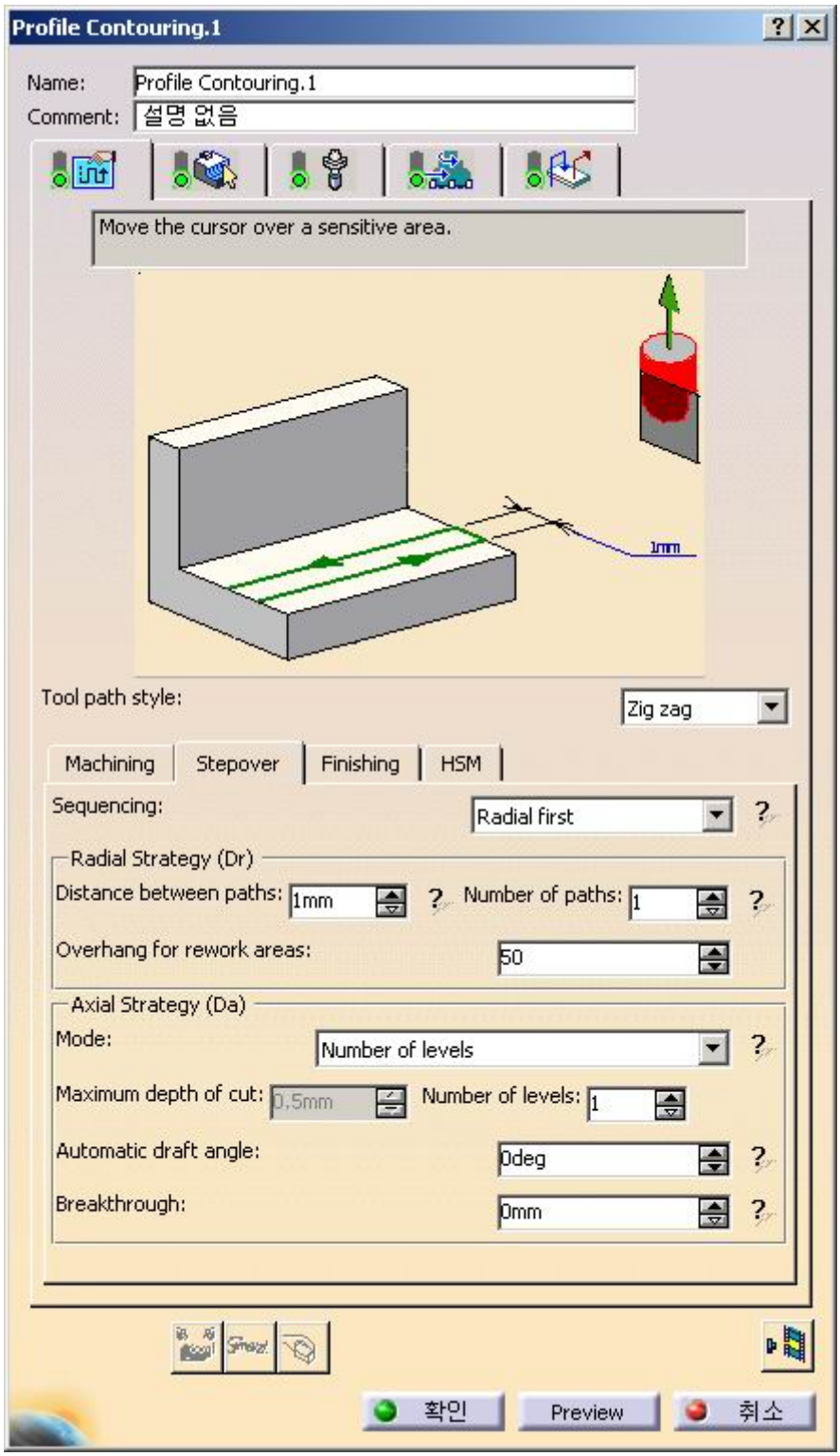


iv. Strategy Tab

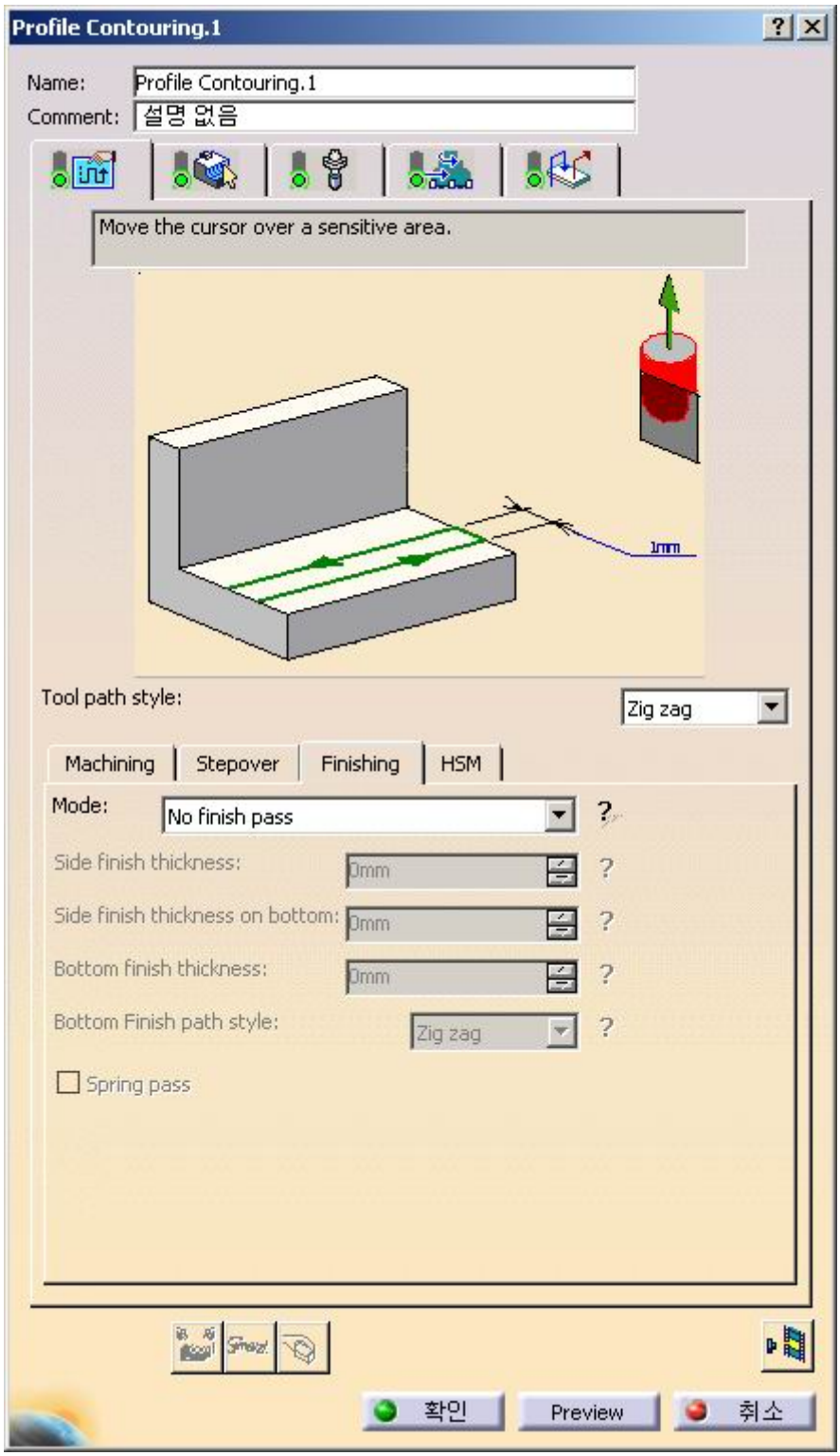
1. Machining



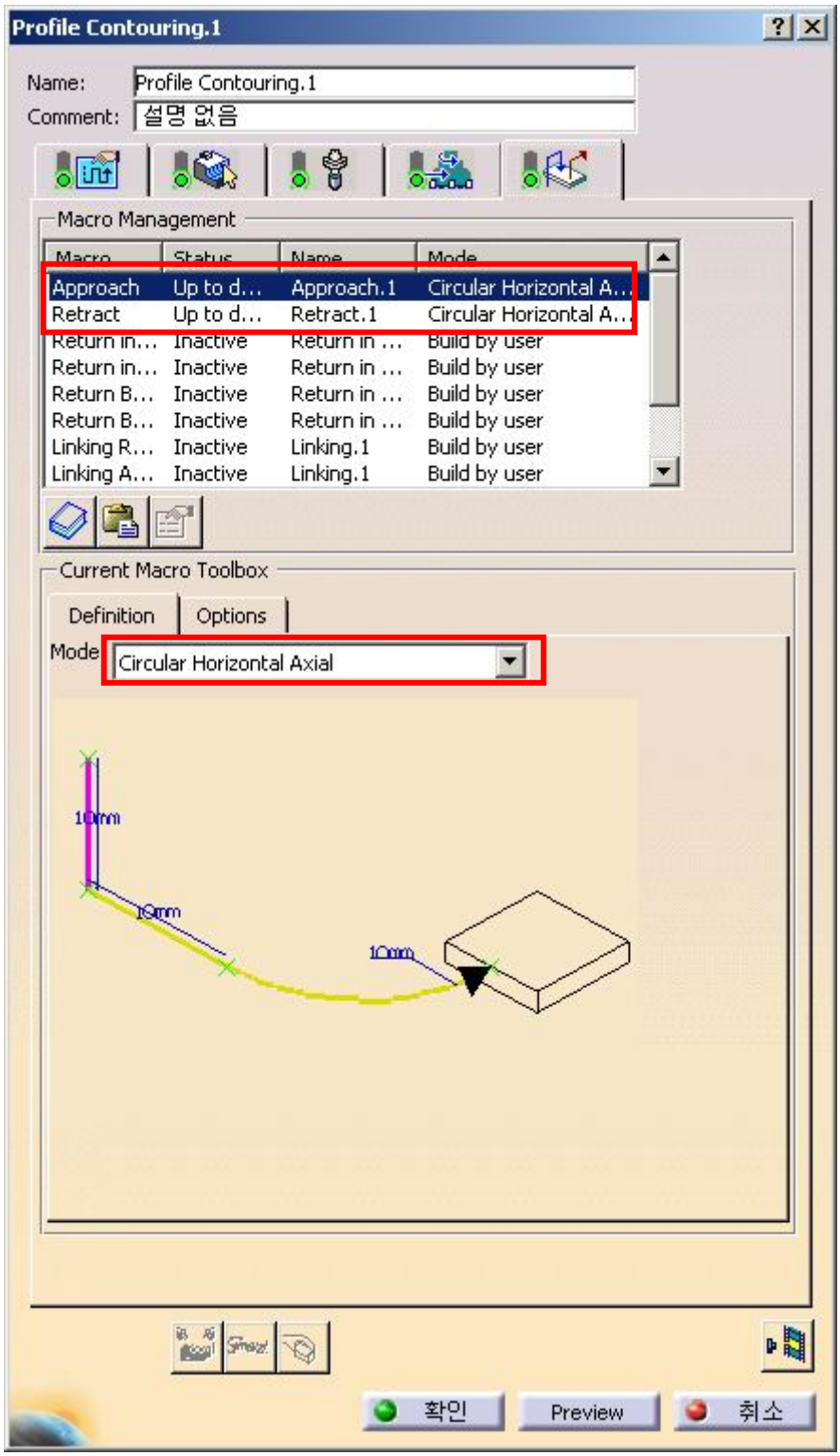
2. Stepover


Profile Contouring.1
Name: Profile Contouring.1
Comment: 설명 없음
Move the cursor over a sensitive area.
1mm
Tool path style:
Zig zag
Machining
Stepover
Finishing
HSM
Sequencing:
Radial first
Radial Strategy (Dr)
Distance between paths: 1mm
Number of paths: 1
Overhang for rework areas:
50
Axial Strategy (Da)
Mode:
Number of levels
Maximum depth of cut: 0.5mm
Number of levels: 1
Automatic draft angle:
0deg
Breakthrough:
0mm
확인
Preview
취소

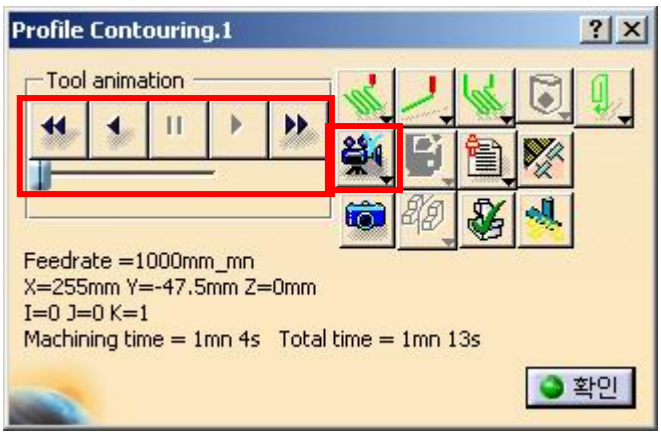
3. Finishing


Profile Contouring.1
Name:
Profile Contouring.1
Comment:
설명 없음
Move the cursor over a sensitive area.
1mm
Tool path style:
Zig zag
Machining
Stepover
Finishing
HSM
Mode:
No finish pass
Side finish thickness:
0mm
Side finish thickness on bottom:
0mm
Bottom finish thickness:
0mm
Bottom Finish path style:
Zig zag
Spring pass
확인
Preview
취소

v. Macro Tab

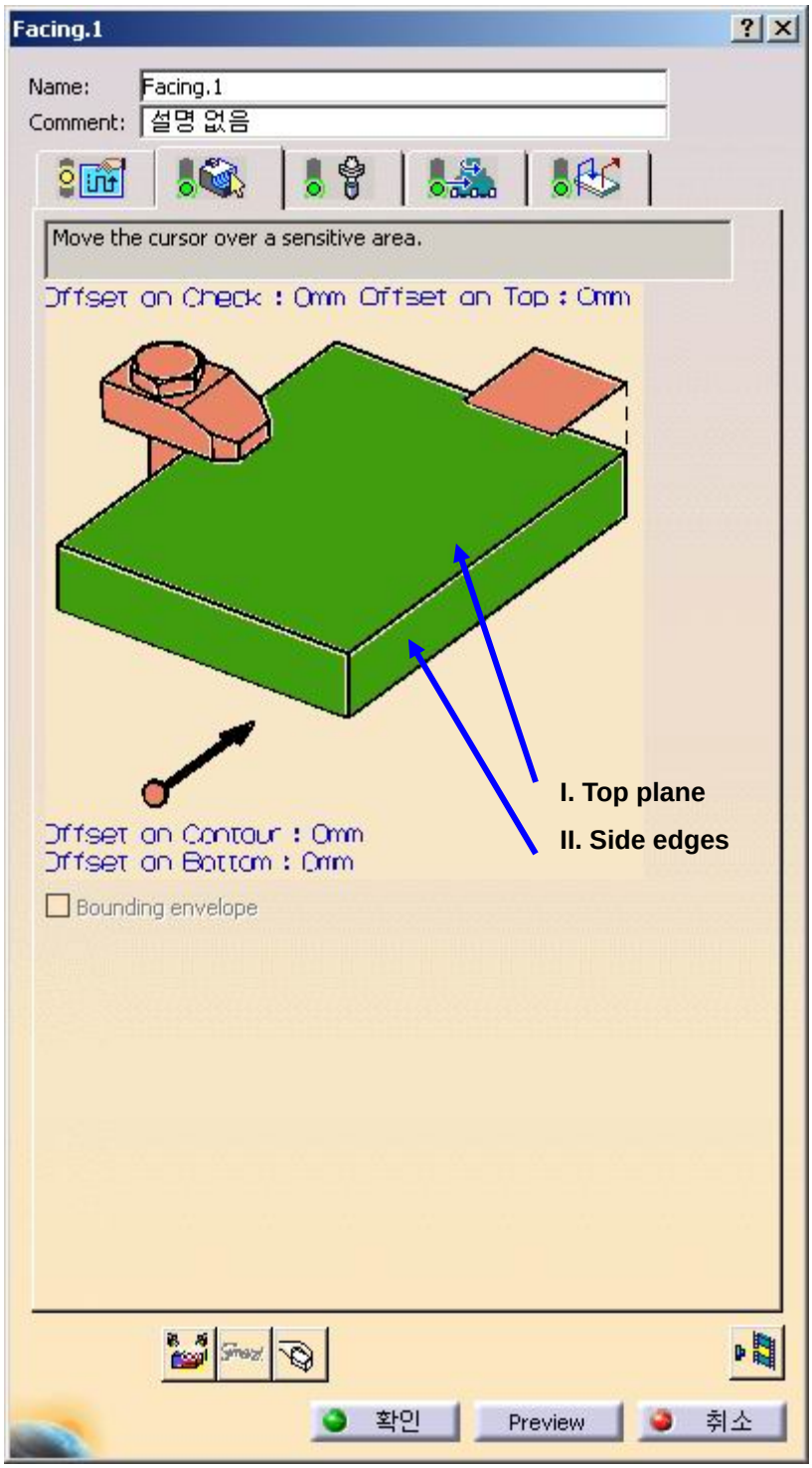


1. Tool Path Replay

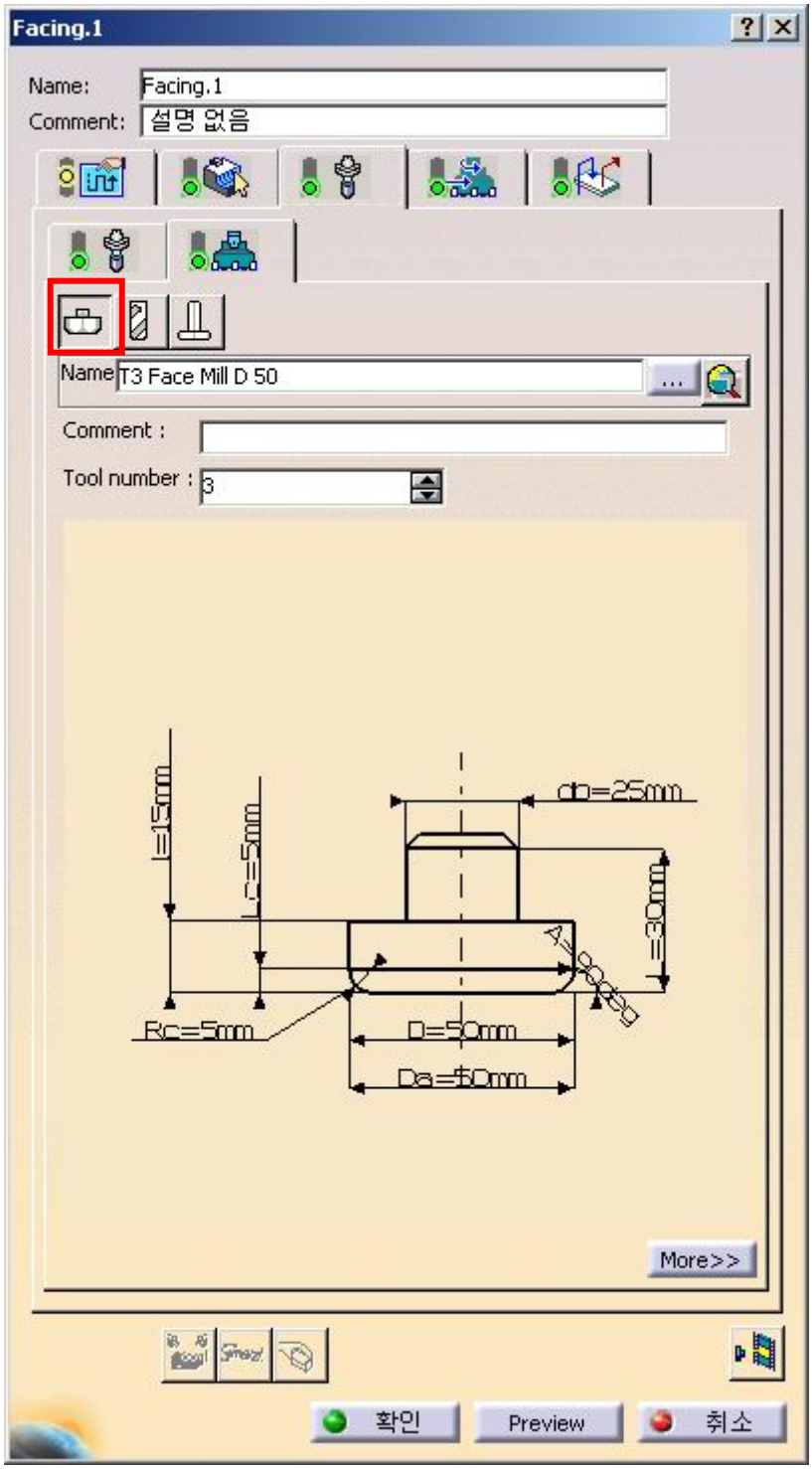


C. Facing

i. Geometry Tab

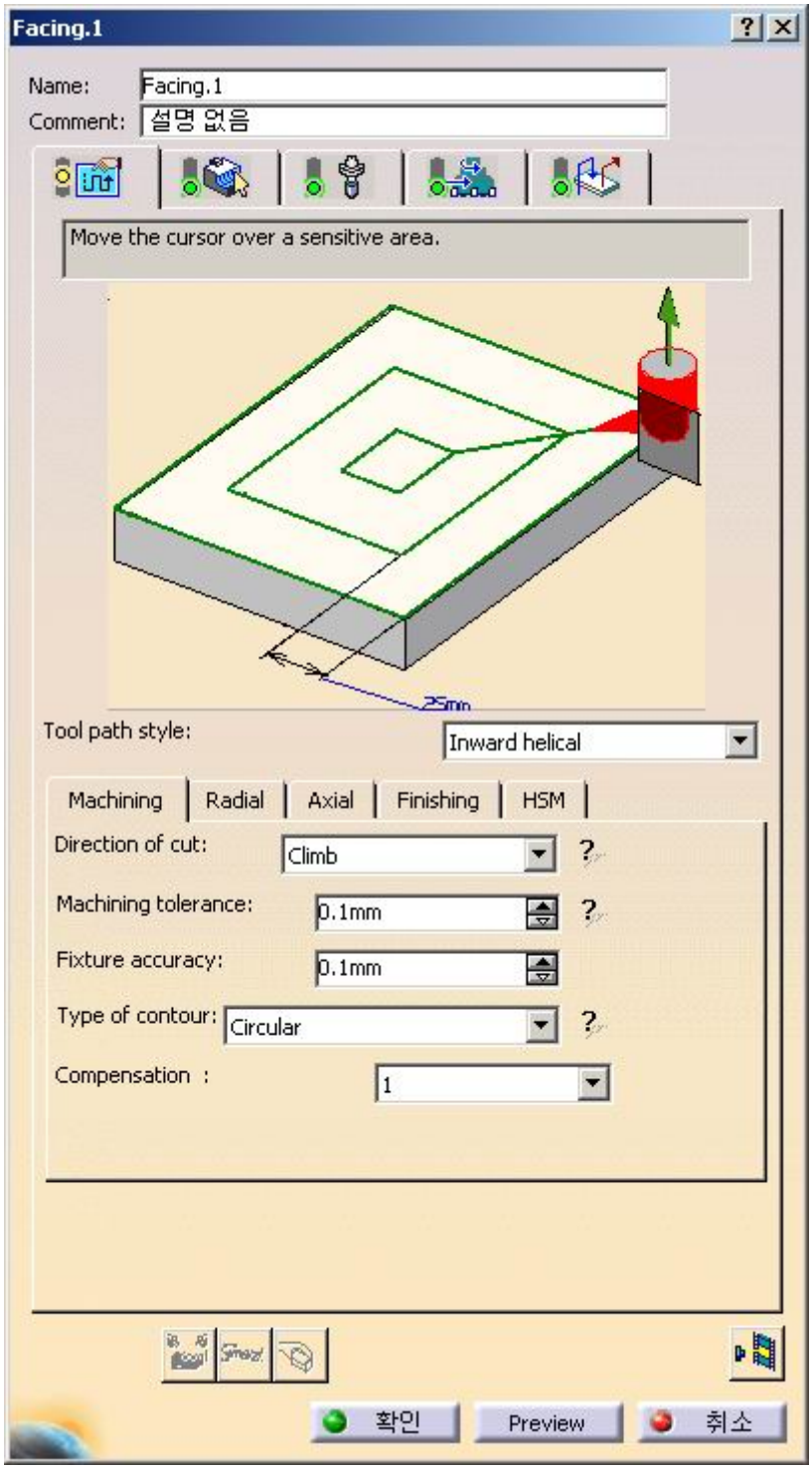


ii. Tool Tab

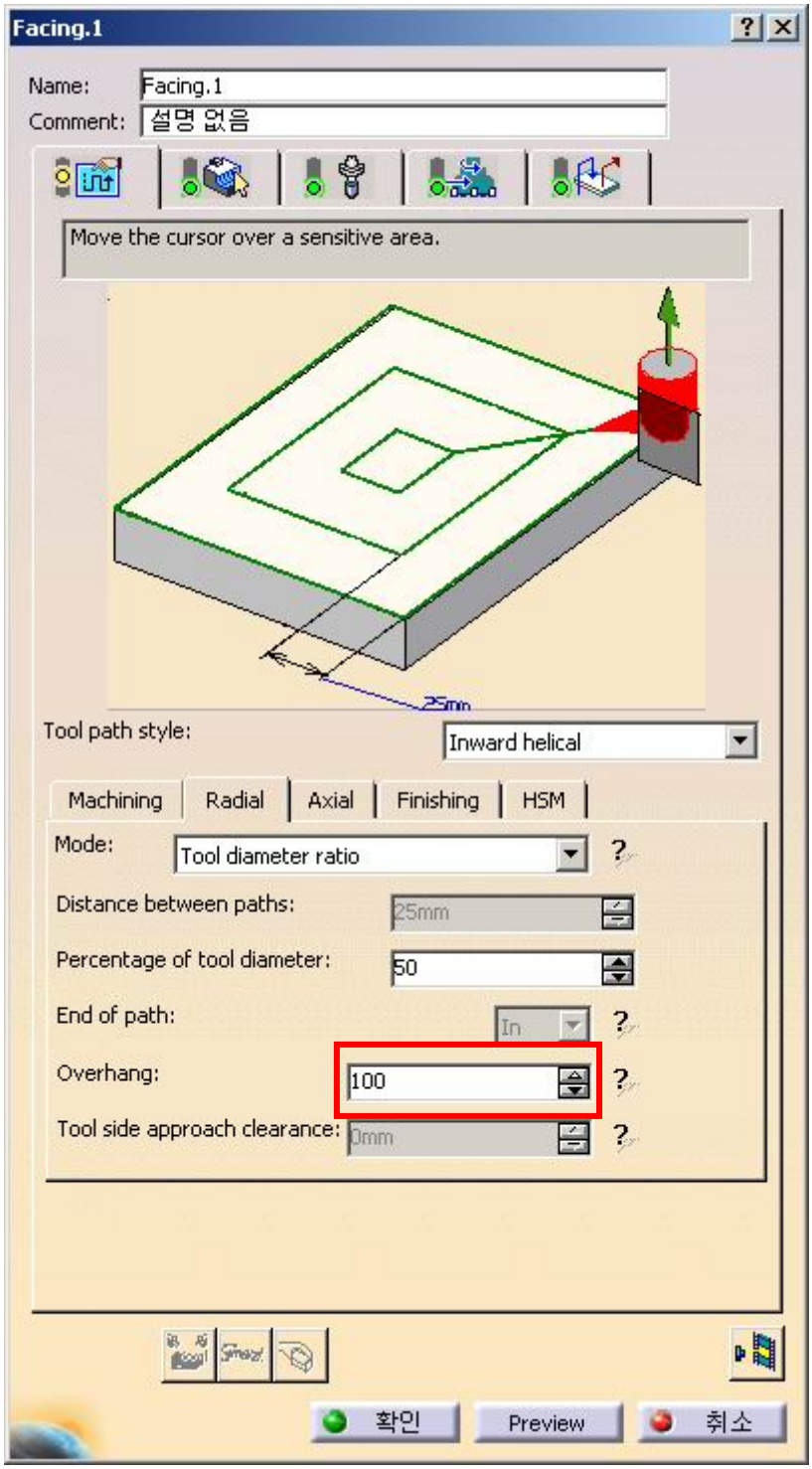

Facing.1
Name:
Facing.1
Comment:
설명 없음
Name
T3 Face Mill D 50
Comment :
Tool number :
3
l=15mm
Lc=5mm
dp=25mm
L=30mm
Rc=5mm
D=50mm
Da=50mm
More>>
확인
Preview
취소

iii. Strategy Tab

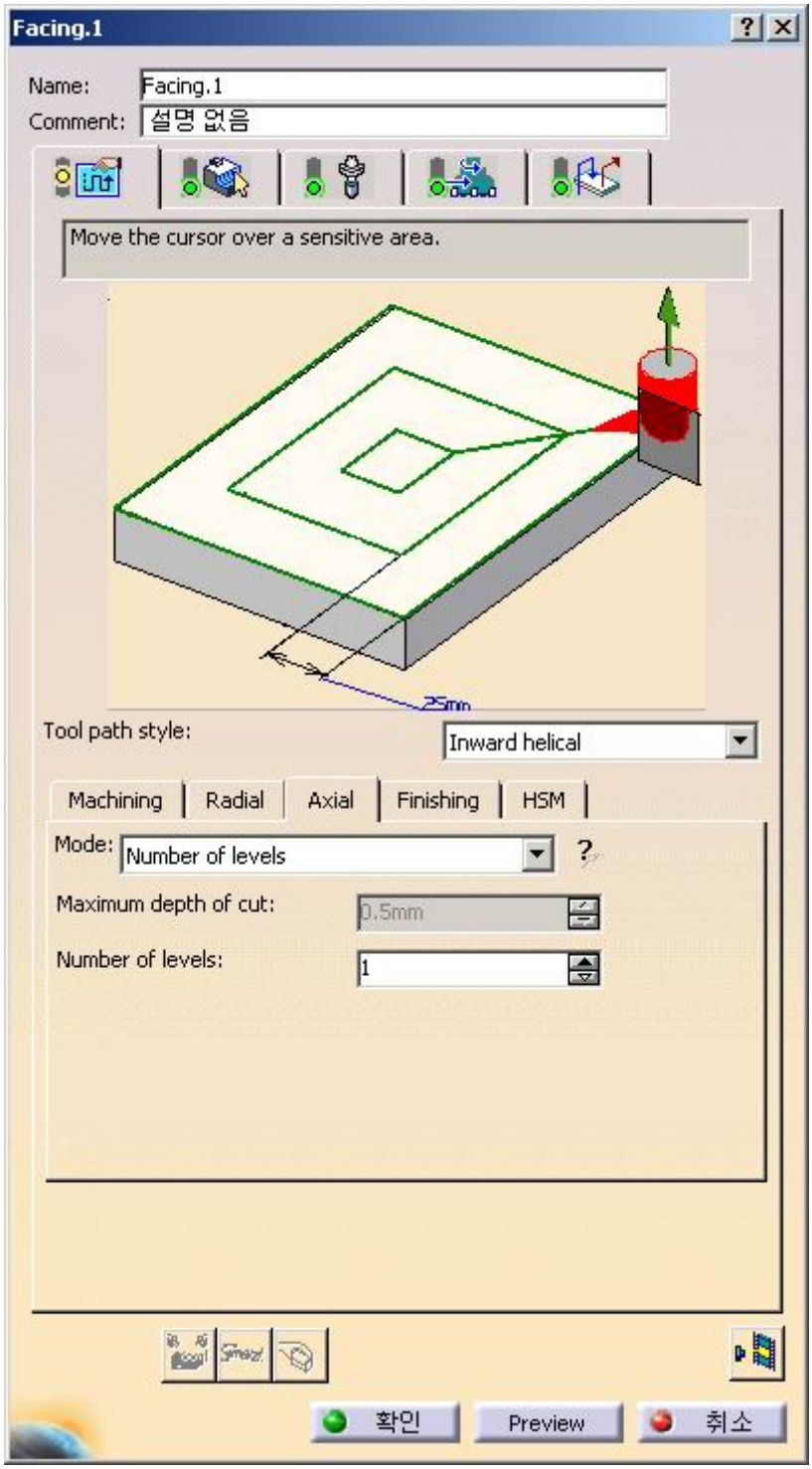
1. Machining



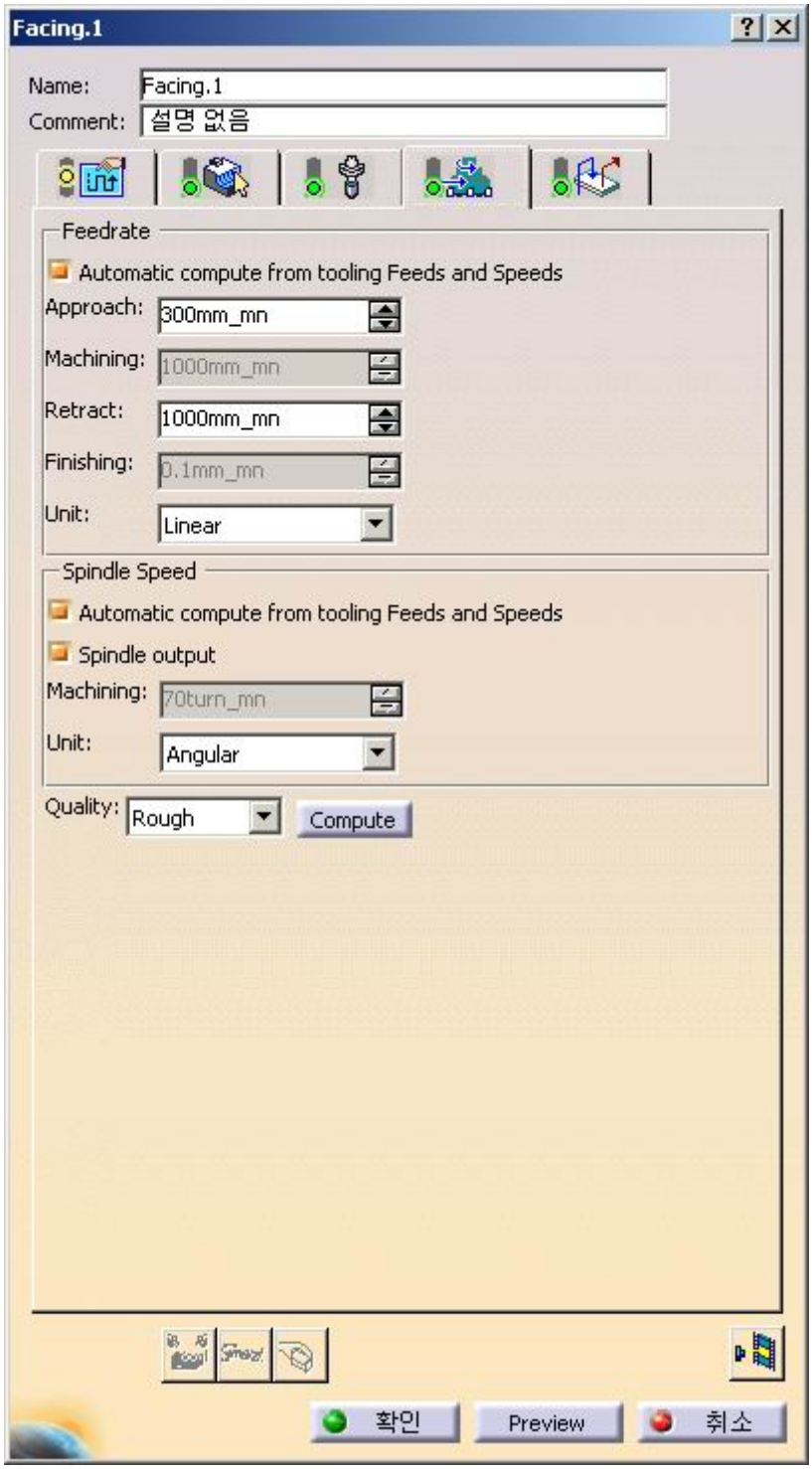
2. Radial


Facing.1
Name:
Facing.1
Comment:
설명 없음
Move the cursor over a sensitive area.
25mm
Tool path style:
Inward helical
Machining
Radial
Axial
Finishing
HSM
Mode:
Tool diameter ratio
Distance between paths:
25mm
Percentage of tool diameter:
50
End of path:
In
Overhang:
100
Tool side approach clearance:
0mm
확인
Preview
취소

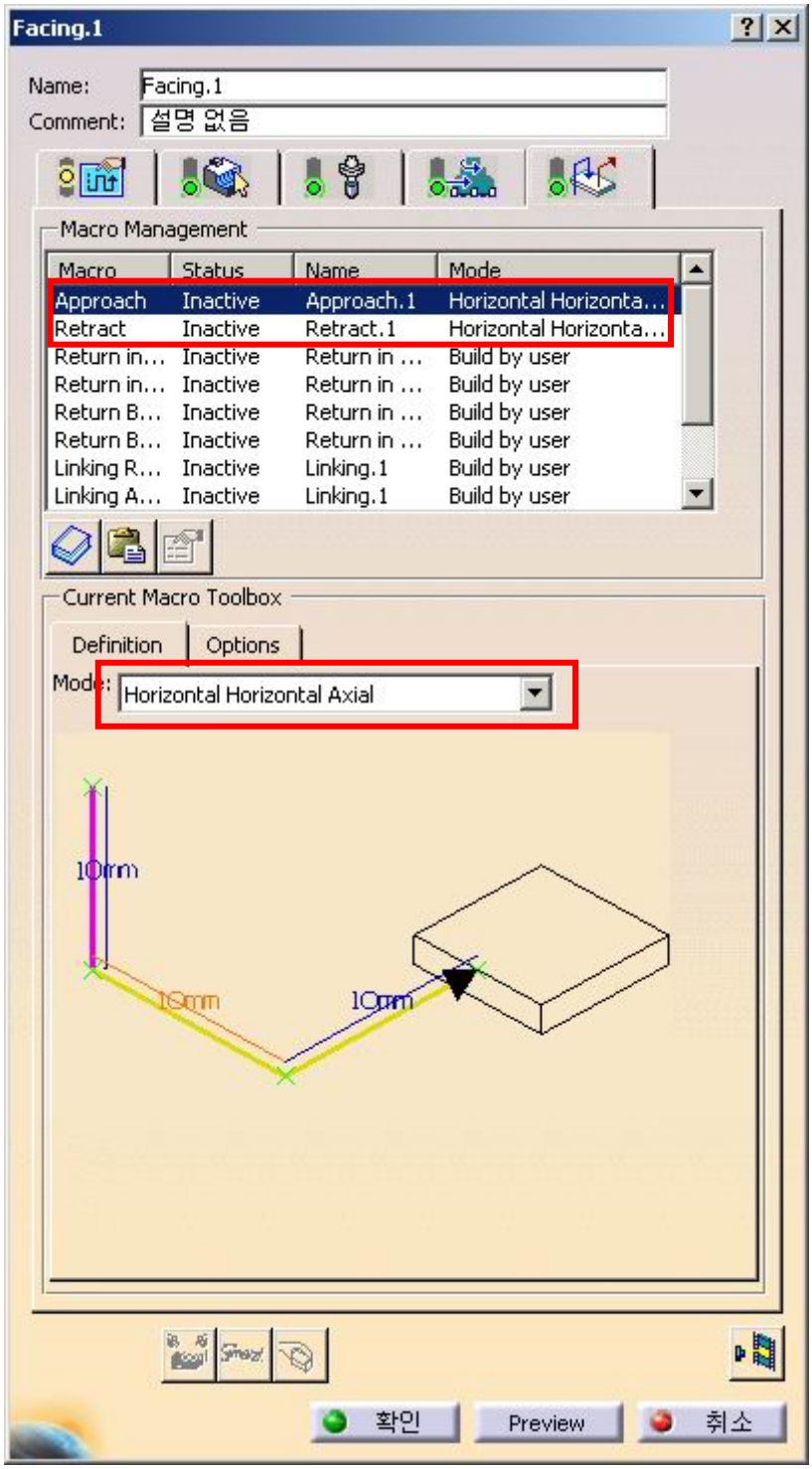
3. Axial


Facing.1
Name:
Facing.1
Comment:
설명 없음
Move the cursor over a sensitive area.
25mm
Tool path style:
Inward helical
Machining
Radial
Axial
Finishing
HSM
Mode:
Number of levels
Maximum depth of cut:
0.5mm
Number of levels:
1
확인
Preview
취소

iv. Feed and Speed Tab



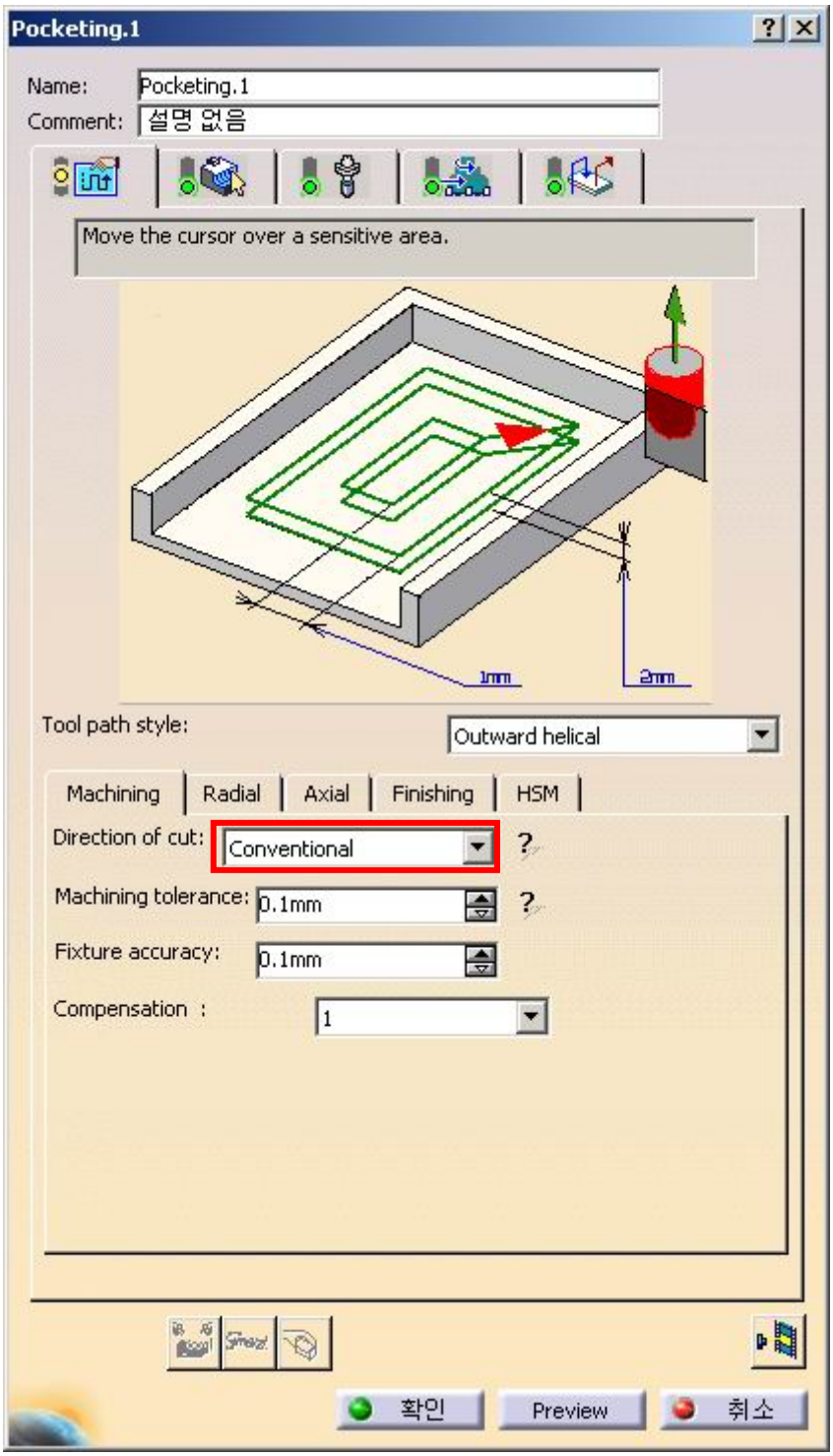
v. Macro Tab


Facing.1
Name: Facing.1
Comment: 설명 없음
Macro Management
Macro Status Name Mode
Approach Inactive Approach.1 Horizontal Horizonta...
Retract Inactive Retract.1 Horizontal Horizonta...
Return in... Inactive Return in ... Build by user
Return in... Inactive Return in ... Build by user
Return B... Inactive Return in ... Build by user
Return B... Inactive Return in ... Build by user
Linking R... Inactive Linking.1 Build by user
Linking A... Inactive Linking.1 Build by user
Current Macro Toolbox
Definition
Options
Mode: Horizontal Horizontal Axial
10mm
10mm
10mm
확인
Preview
취소

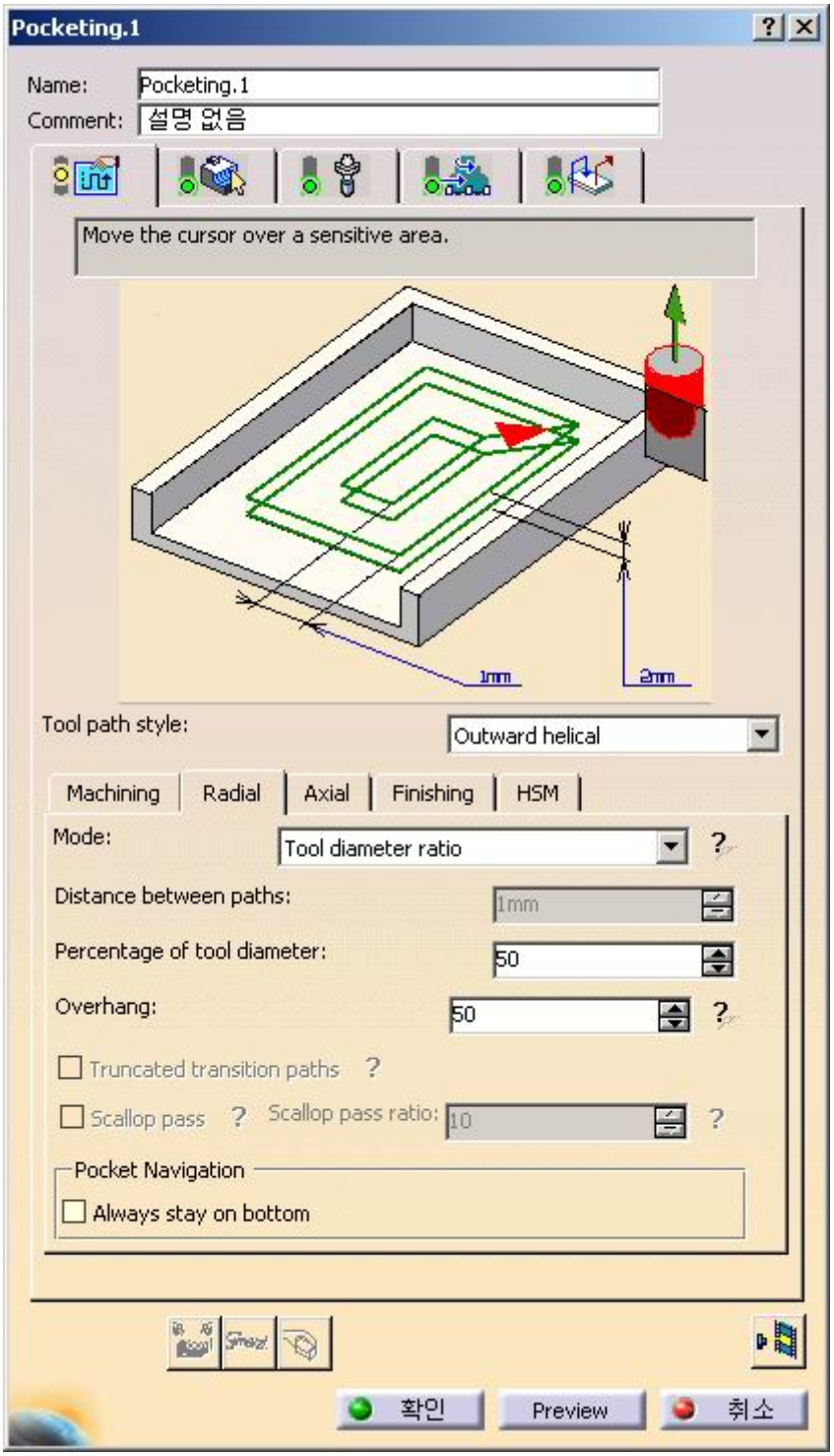
D. Pocketing

i. Strategy Tab

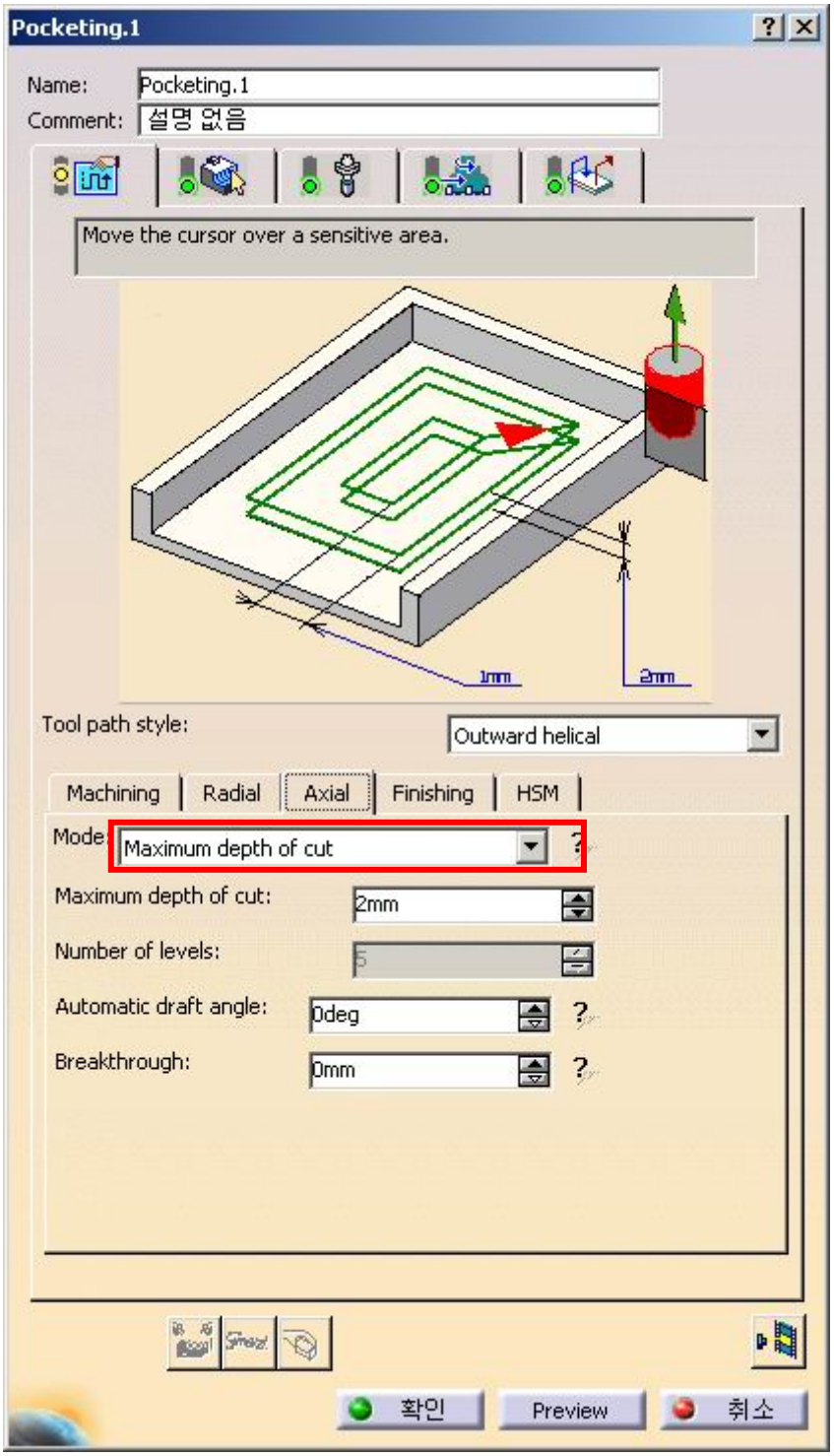
1. Machining



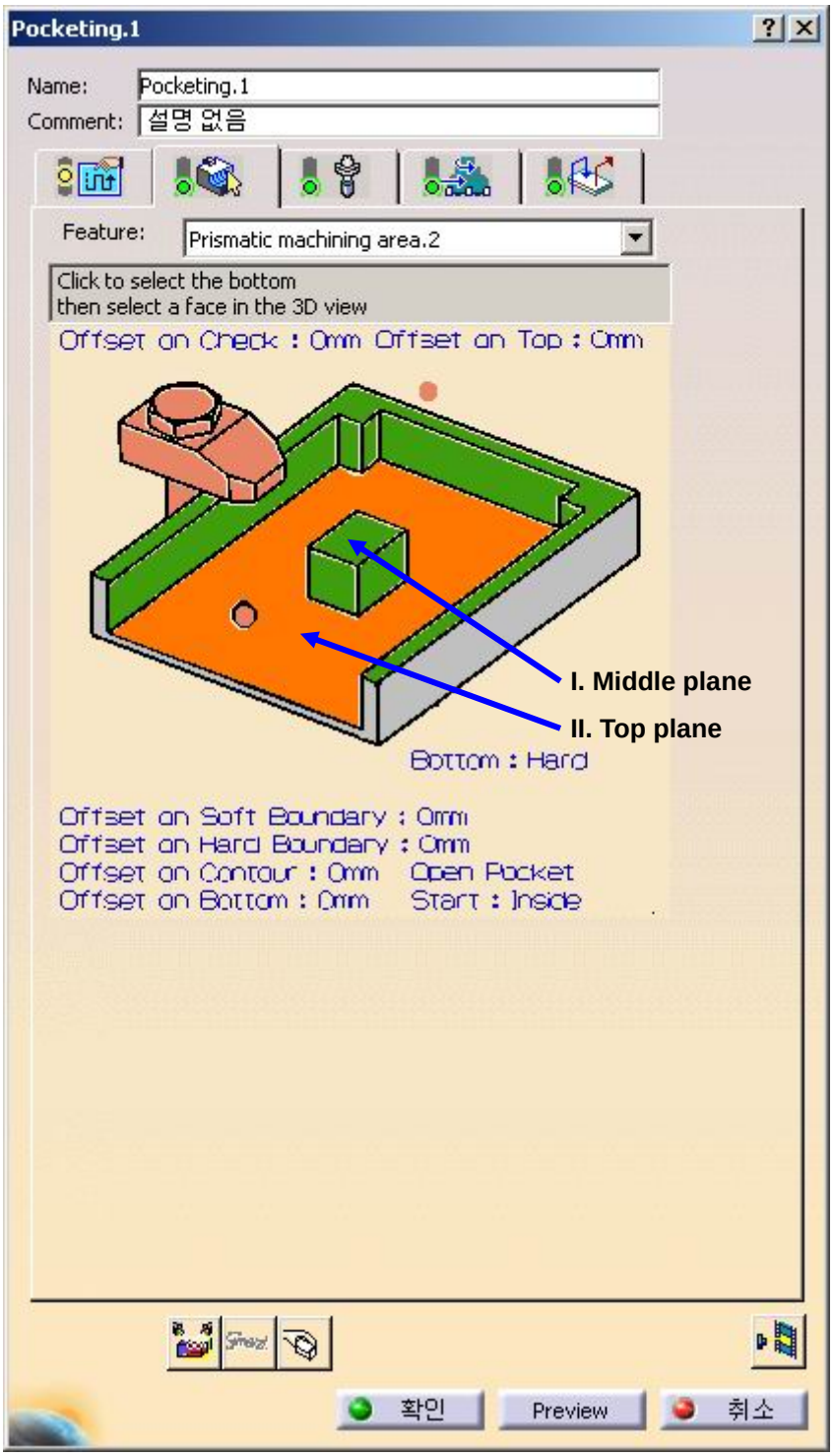
2. Radial


Pocketing.1
Name:
Pocketing.1
Comment:
설명 없음
Move the cursor over a sensitive area.
1mm
2mm
Tool path style:
Outward helical
Machining
Radial
Axial
Finishing
HSM
Mode:
Tool diameter ratio
Distance between paths:
1mm
Percentage of tool diameter:
50
Overhang:
50
Truncated transition paths
Scallop pass
Scallop pass ratio:
10
Pocket Navigation
Always stay on bottom
확인
Preview
취소

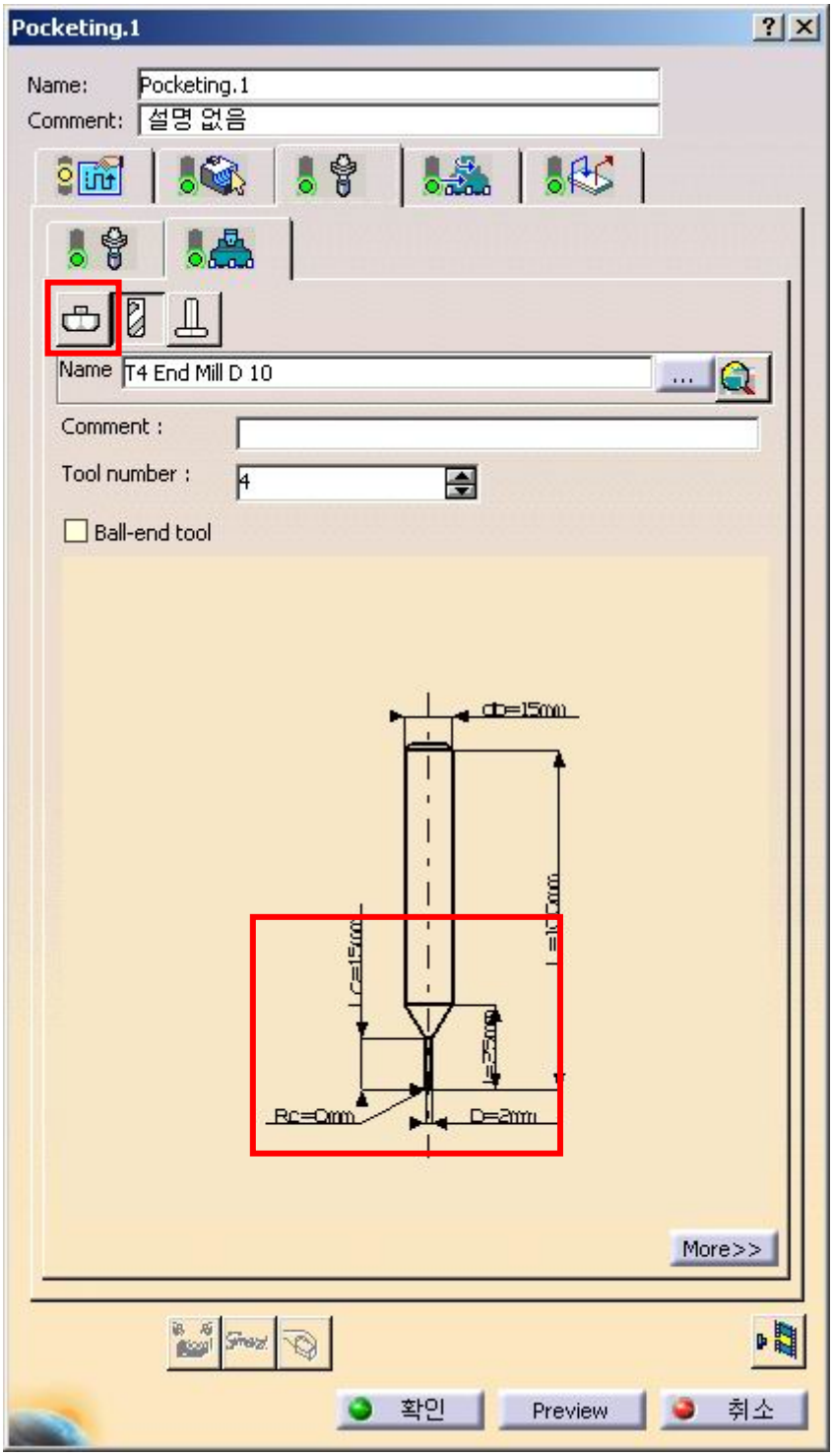
3. Axis


Pocketing.1
Name:
Pocketing.1
Comment:
설명 없음
Move the cursor over a sensitive area.
1mm
2mm
Tool path style:
Outward helical
Machining
Radial
Axial
Finishing
HSM
Mode:
Maximum depth of cut
Maximum depth of cut:
2mm
Number of levels:
5
Automatic draft angle:
0deg
Breakthrough:
0mm
확인
Preview
취소

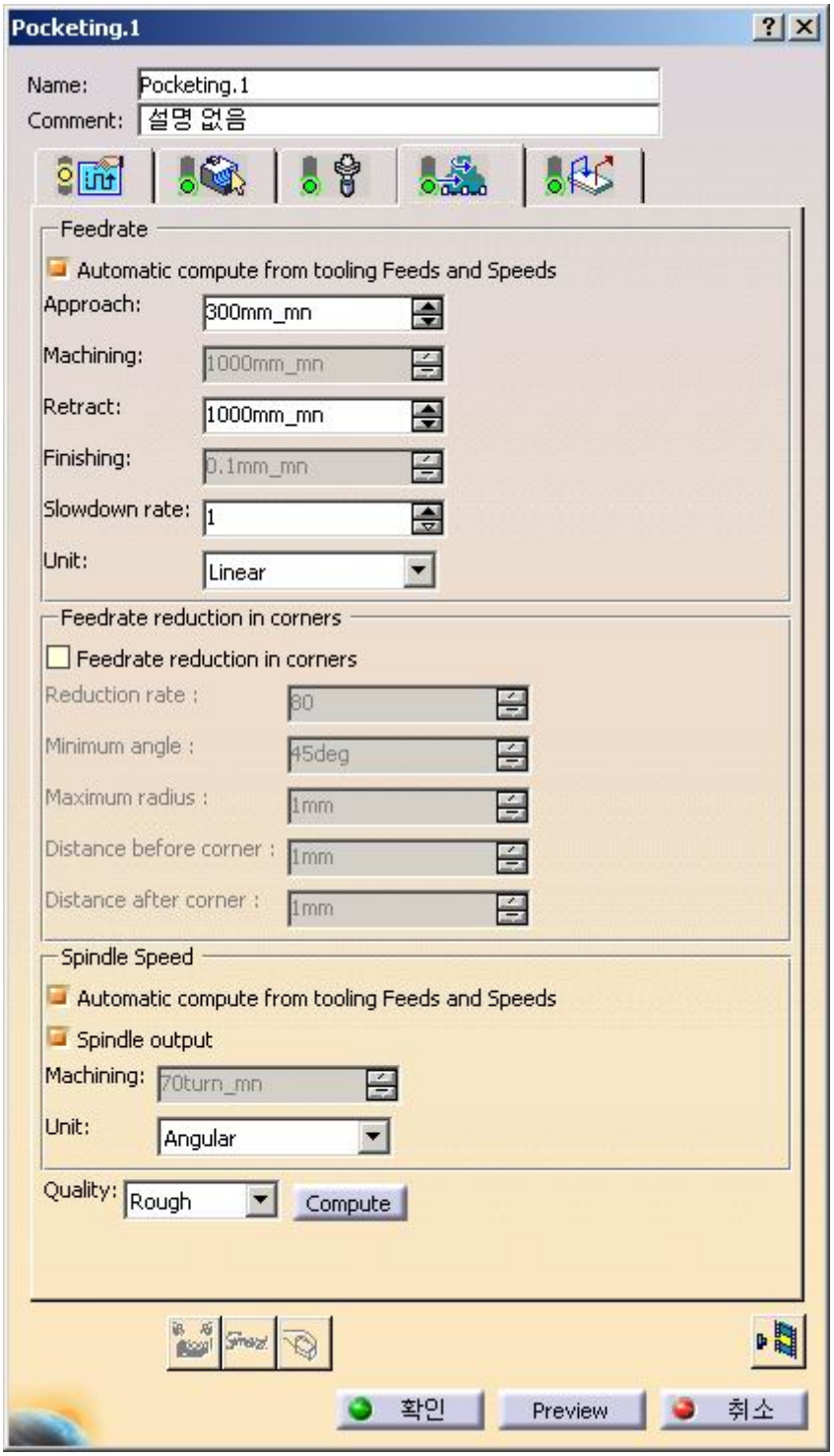
ii. Geometry Tab



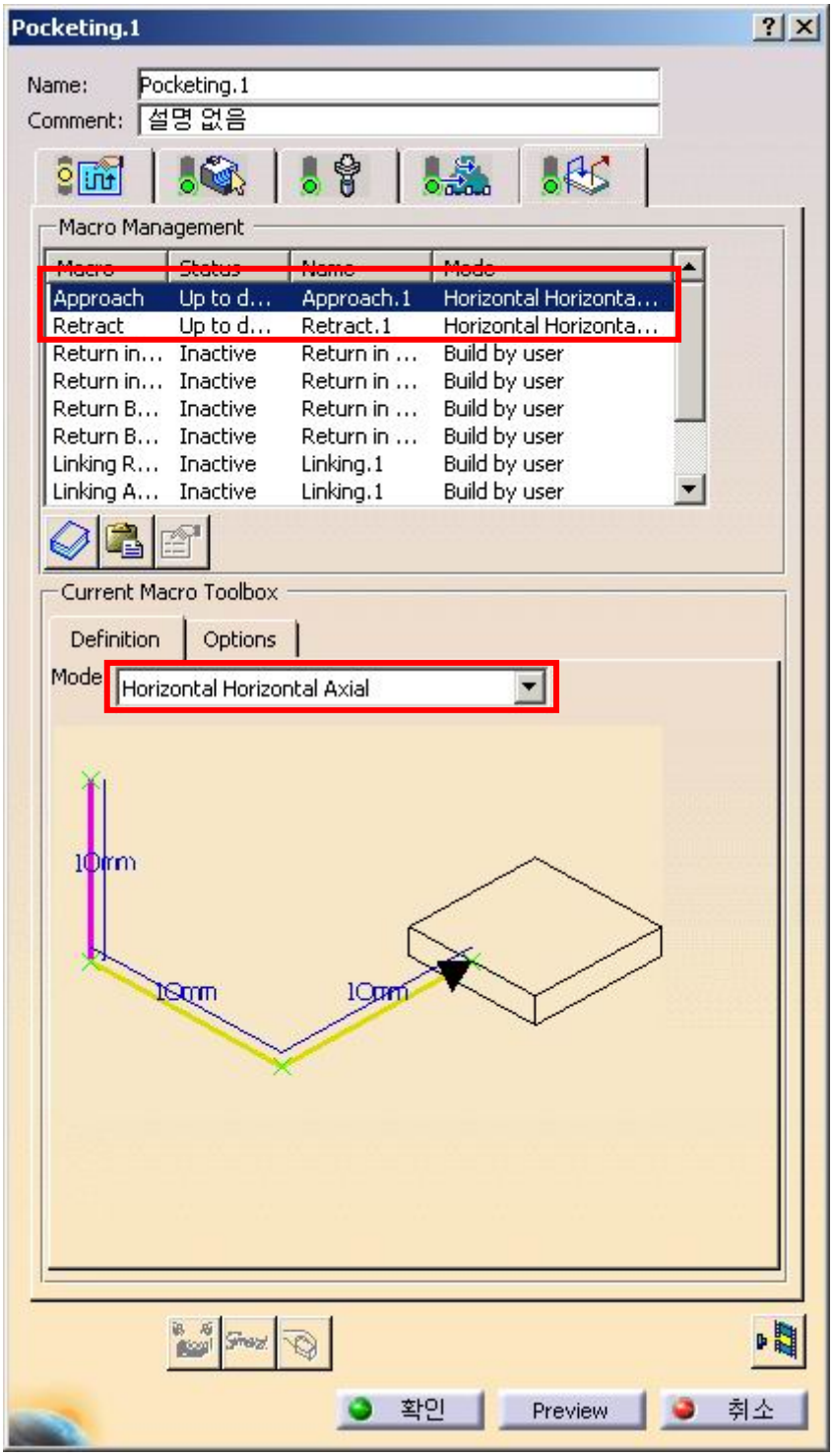
iii. Tool Tab


Pocketing.1
Name:
Pocketing.1
Comment:
설명 없음
Name
T4 End Mill D 10
Comment :
Tool number :
4
Ball-end tool
More>>
확인
Preview
취소

iv. Feed and Speed Tab

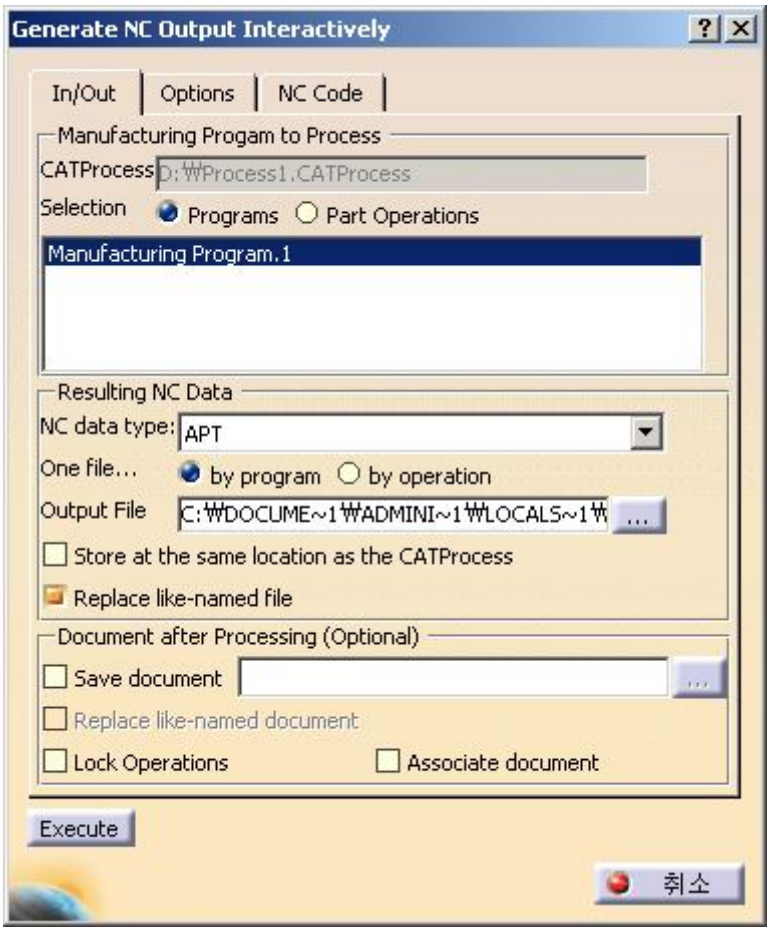


v. Macro Tab

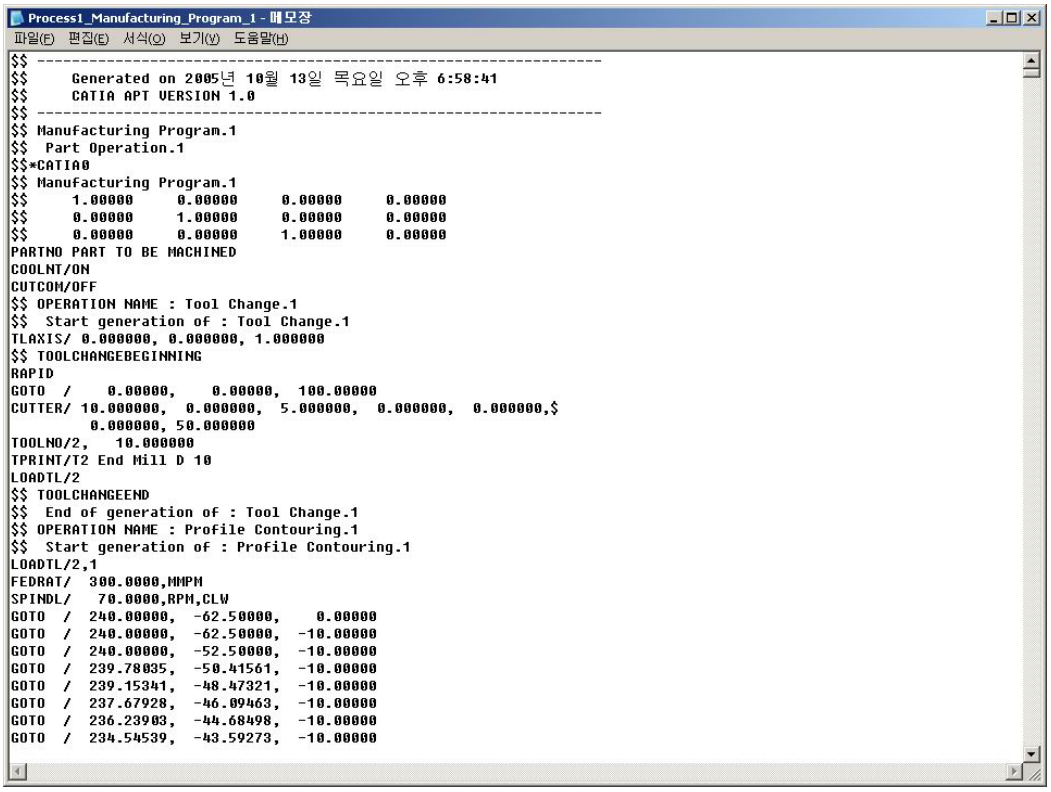

Pocketing.1
Name: Pocketing.1
Comment: 설명 없음
Macro Management
Macro Status Name Mode
Approach Up to d... Approach.1 Horizontal Horizonta...
Retract Up to d... Retract.1 Horizontal Horizonta...
Return in... Inactive Return in ... Build by user
Return in... Inactive Return in ... Build by user
Return B... Inactive Return in ... Build by user
Return B... Inactive Return in ... Build by user
Linking R... Inactive Linking.1 Build by user
Linking A... Inactive Linking.1 Build by user
Current Macro Toolbox
Definition
Options
Mode
Horizontal Horizontal Axial
10mm
10mm
10mm
확인
Preview
취소

2. NC Output Generations

A. Generate NC Interactively



i. Generated NC code



```
$$ ----------------------------------------------------------------
$$     Generated on 2005년 10월 13일 목요일 오후 6:58:41
$$     CATIA APT VERSION 1.0
$$ ----------------------------------------------------------------
$$ Manufacturing Program.1
$$  Part Operation.1
$$*CATIA0
$$ Manufacturing Program.1
$$     1.00000     0.00000     0.00000     0.00000
$$     0.00000     1.00000     0.00000     0.00000
$$     0.00000     0.00000     1.00000     0.00000
PARTNO PART TO BE MACHINED
COOLNT/ON
CUTCOM/OFF
$$ OPERATION NAME : Tool Change.1
$$  Start generation of : Tool Change.1
TLAXIS/ 0.000000, 0.000000, 1.000000
$$ TOOLCHANGEBEGINNING
RAPID
GOTO  /    0.00000,    0.00000,  100.00000
CUTTER/ 10.000000,  0.000000,  5.000000,  0.000000,  0.000000,$
          0.000000, 50.000000
TOOLNO/2,   10.000000
TPRINT/T2 End Mill D 10
LOADTL/2
$$ TOOLCHANGEEND
$$  End of generation of : Tool Change.1
$$ OPERATION NAME : Profile Contouring.1
$$  Start generation of : Profile Contouring.1
LOADTL/2,1
FEDRAT/  300.0000,MMPM
SPINDL/   70.0000,RPM,CLW
GOTO  /  240.00000,  -62.50000,    0.00000
GOTO  /  240.00000,  -62.50000,  -10.00000
GOTO  /  240.00000,  -52.50000,  -10.00000
GOTO  /  239.78035,  -50.41561,  -10.00000
GOTO  /  239.15341,  -48.47321,  -10.00000
GOTO  /  237.67928,  -46.09463,  -10.00000
GOTO  /  236.23903,  -44.68498,  -10.00000
GOTO  /  234.54539,  -43.59273,  -10.00000
```