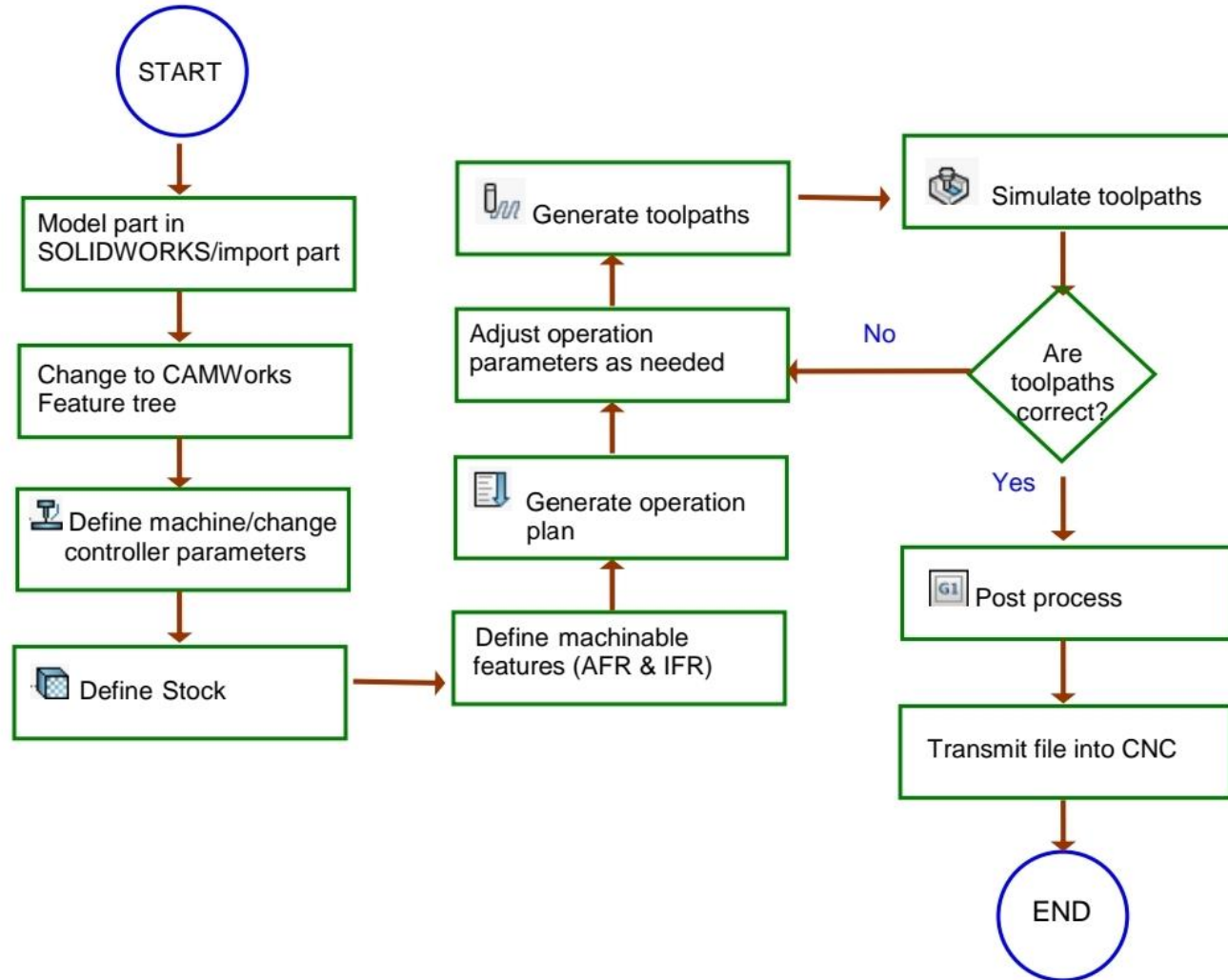


Mill

CAM

CAMWorks

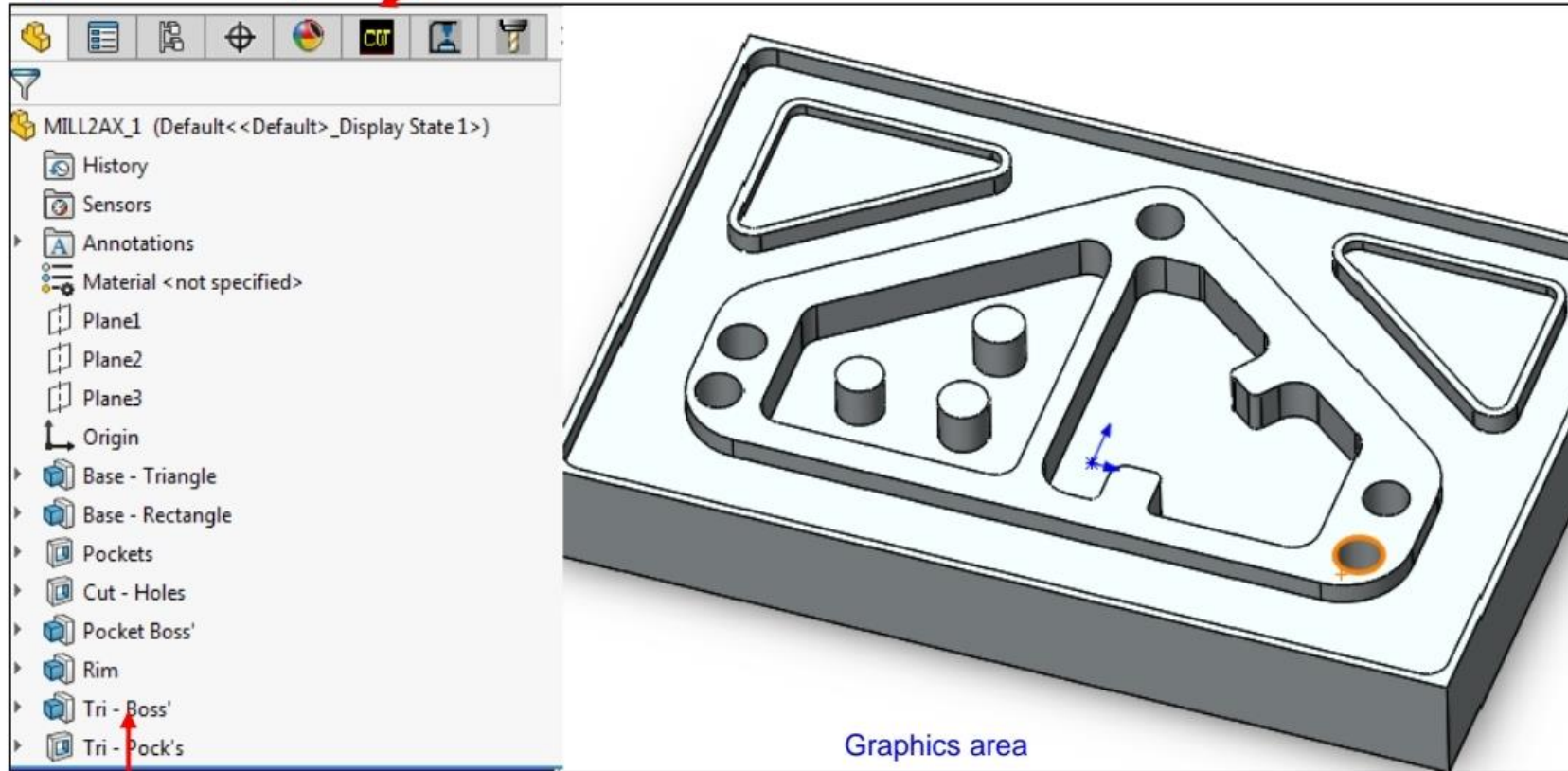
2 Axis Mill Basics



2 Axis Mill Basics

Tabs for SOLIDWORKS/
CAMWorks Solids Trees

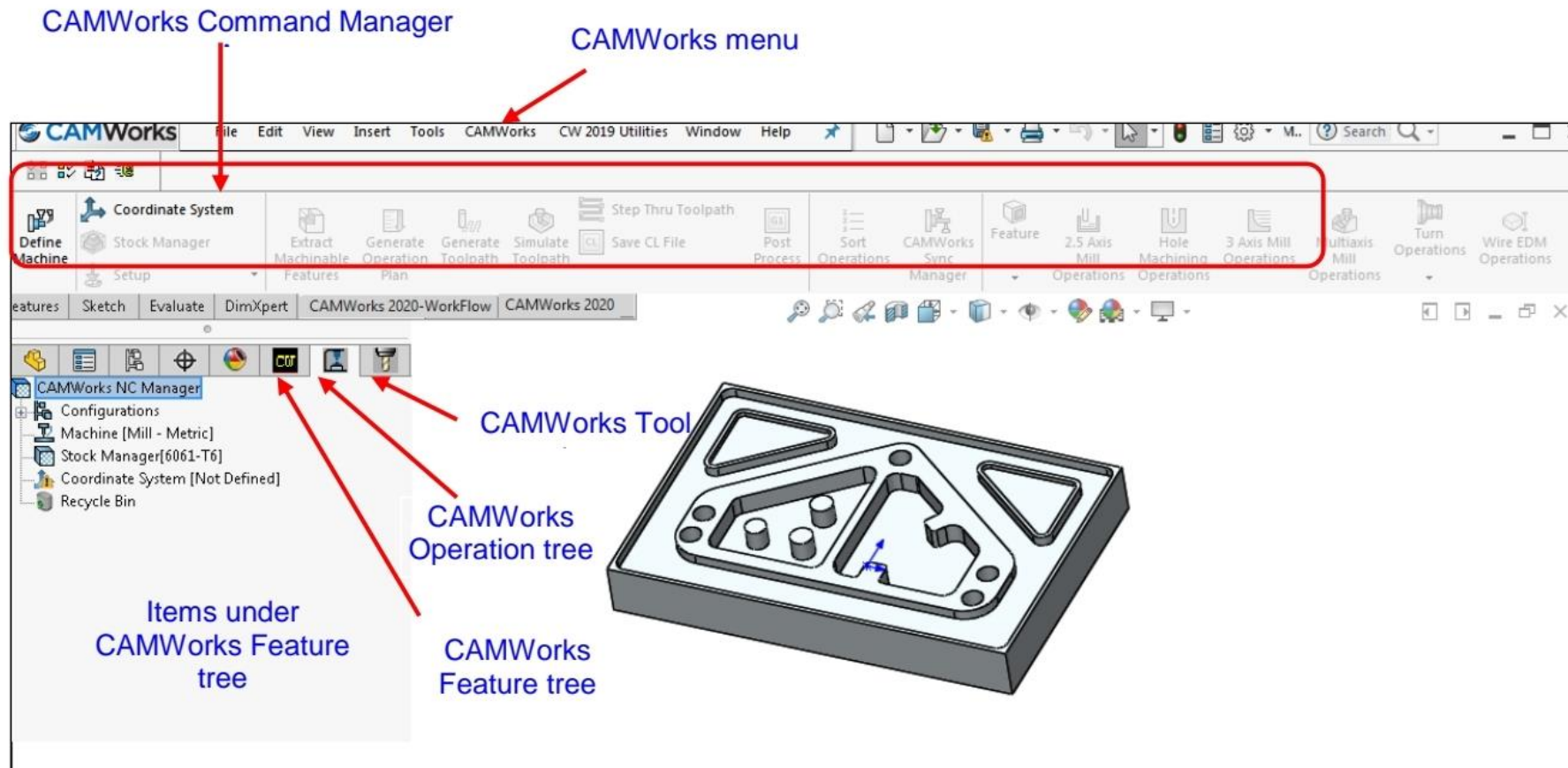
CAMWorks Feature Tree tab



Graphics area

Items under the Feature
Manager Design tree

2 Axis Mill Basics



2 Axis Mill Basics

Define the Machine



Mill Machine



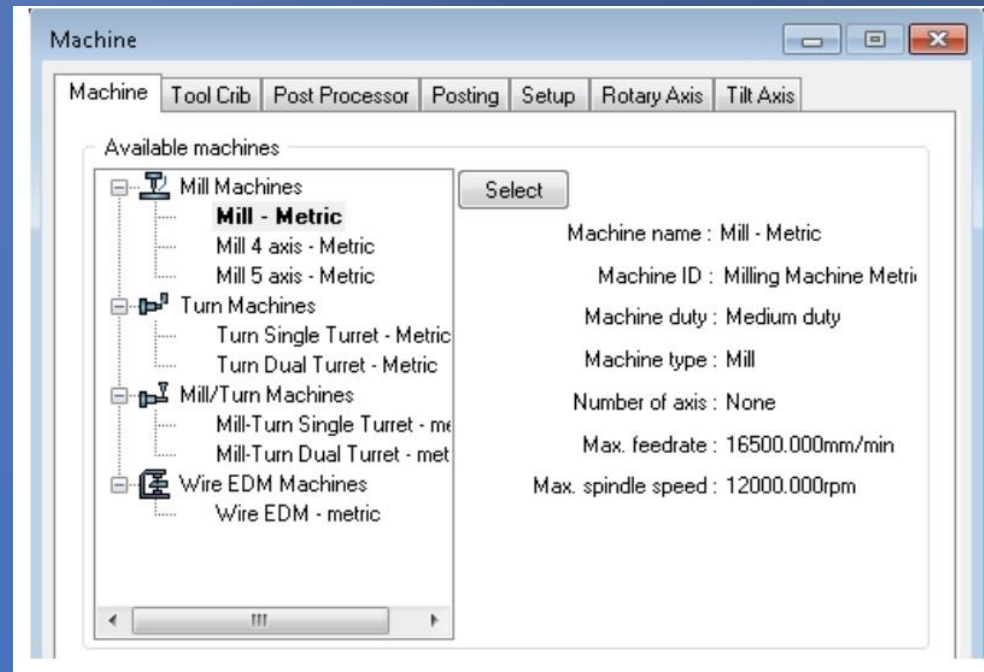
Turn Machine



Mill-Turn Machine



Wire EDM



2 Axis Mill Basics

Tool Crib tab of Machine Dialog Box

Machine

Machine Tool Crib Post Processor Posting Setup Rotary Axis Tilt Axis

Tool crib

Active tool crib : Tool Crib 2 (Metric)

Usage	Stn. No.	Tool Type	ID	Comment	Dia. (mm)	R
	1	Flat End	10	6MM CRB 2FL 19 LOC	6	0
	2	Flat End	14	10MM CRB 2FL 22 LOC	10	0
	3	Flat End	16	12MM CRB 2FL 25 LOC	12	0
	4	Flat End	18	16MM CRB 2FL 32 LOC	16	0
	5	Flat End	24	20MM CRB 2FL 38 LOC	20	0
	6	Center Drill	4	6MM X 60DEG HSS CENTERDRILL	6	0
	7	Ball Nose	42	4MM CRB 4FL BM 14 LOC	4	2
	8	Ball Nose	64	10MM CRB 4FL BM 22 LOC	10	5
	9	Ball Nose	65	12MM CRB 4FL BM 25 LOC	12	6
	10	Bore	73	ADJUSTABLE BORE 1MM - 12.7MM	1	0
	11	Countersink	9	5MM HSS 90DEG COUNTERSINK	5	0
	12	Face Mill	2	50MM 5FL FACE MILL	50	0

< >

Add Tool... Edit Tool... Remove Tool Update Tool Save Tool Crib...

Tool crib has sub stations

Tool crib priority

Use tool crib tools only

Available tool cribs

Tool Crib 1 (Metric) Empty
Tool Crib 2 (Metric)
Tool Crib 3 (Metric) Assemblies

Select

Name : Tool Crib 2 (Metric)

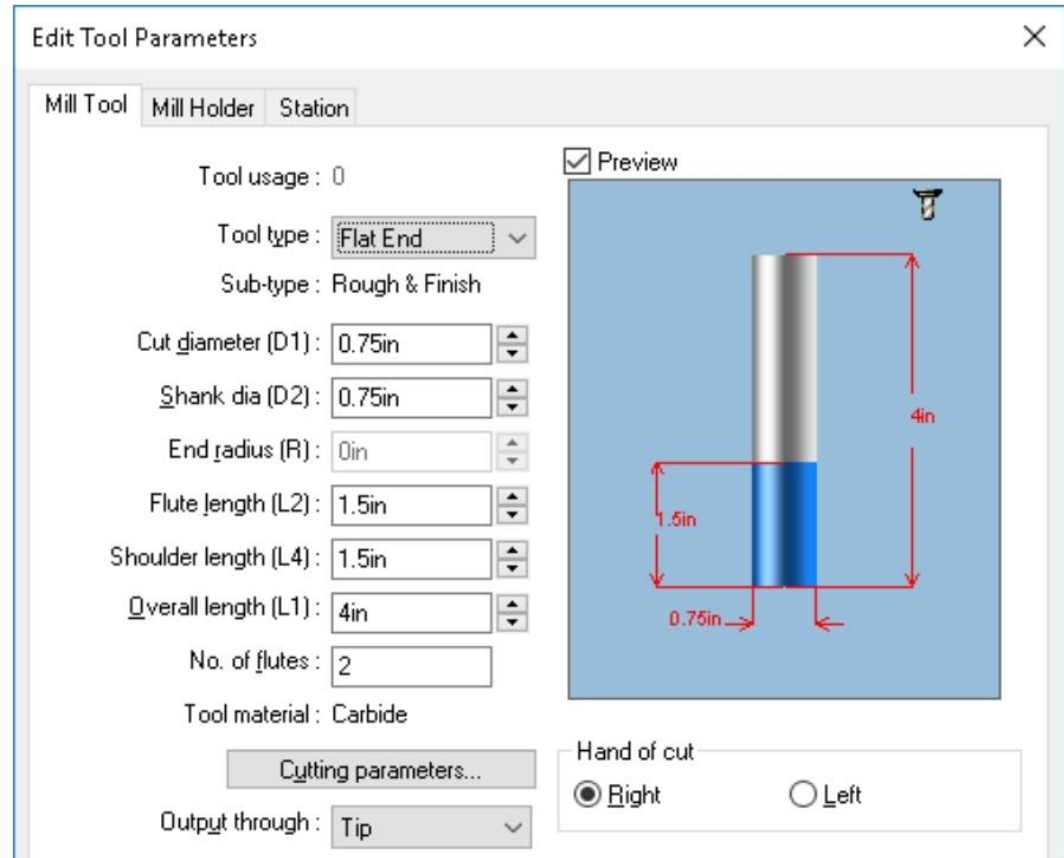
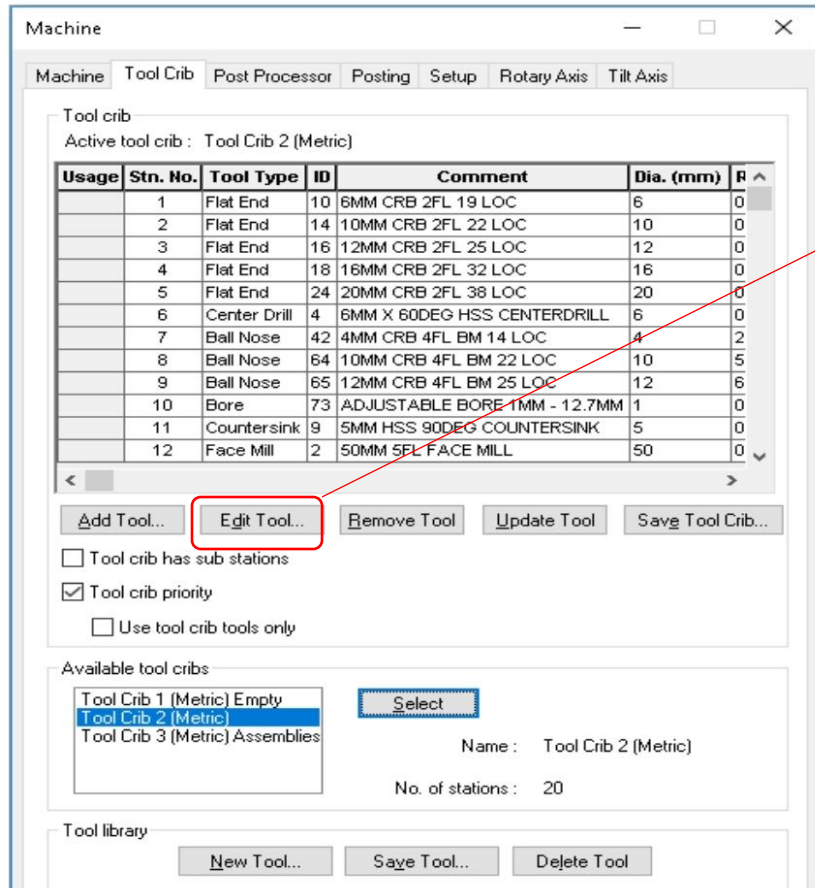
No. of stations : 20

Tool library

New Tool... Save Tool... Delete Tool

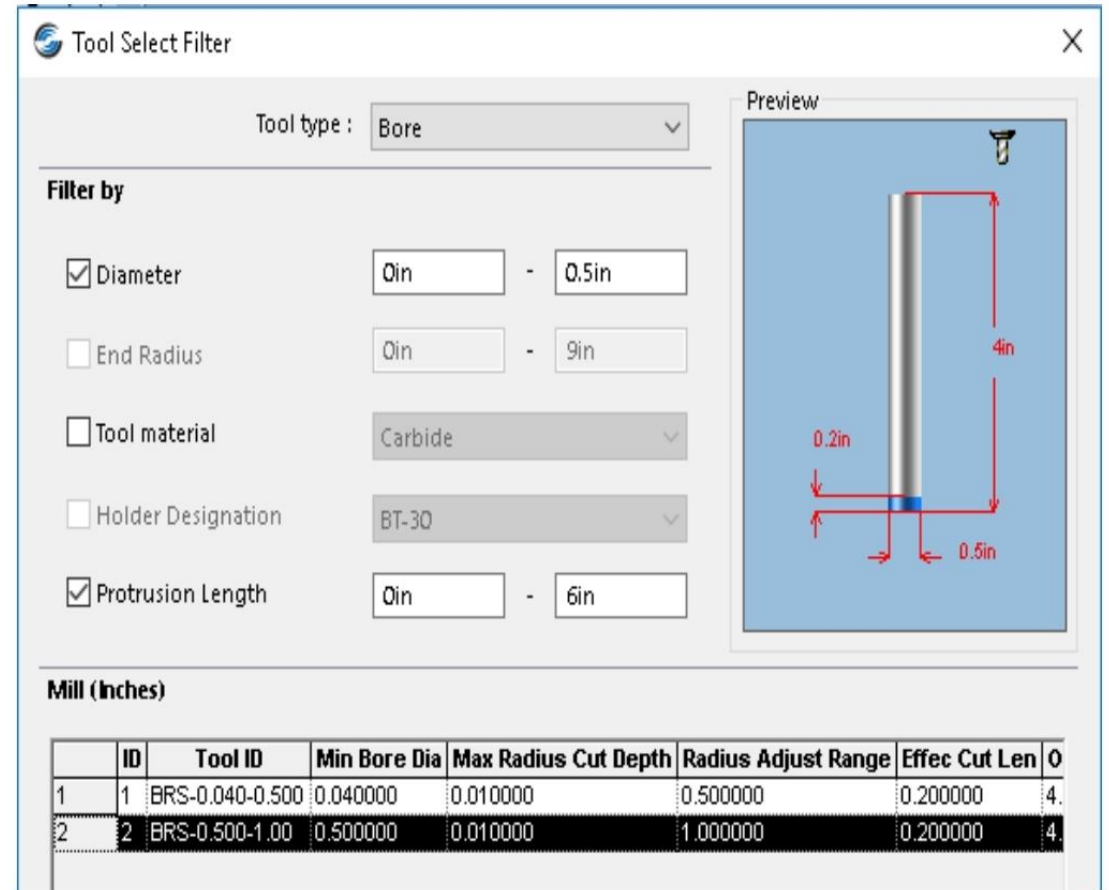
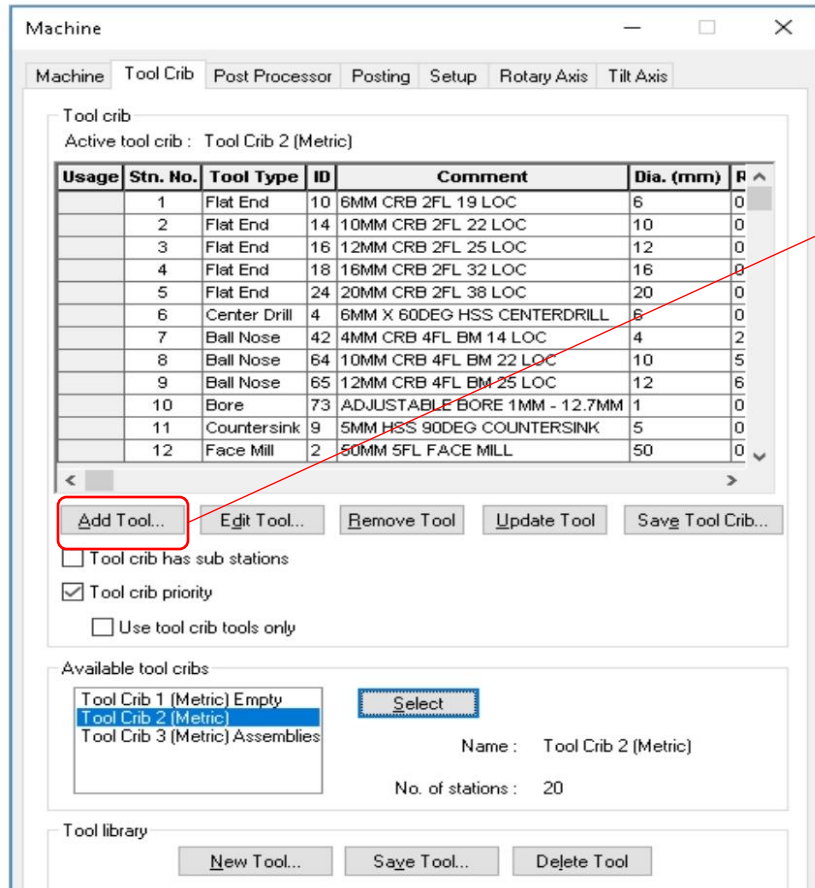
2 Axis Mill Basics

Edit Tool Parameter Dialog box



2 Axis Mill Basics

Tool Select filter dialog box



2 Axis Mill Basics

Posting tab of Machine Dialog Box

Machine

Machine | Tool Crib | Post Processor | **Posting** | Setup | Rotary Axis | Tilt Axis

Define coolant from
 Tool Post processor

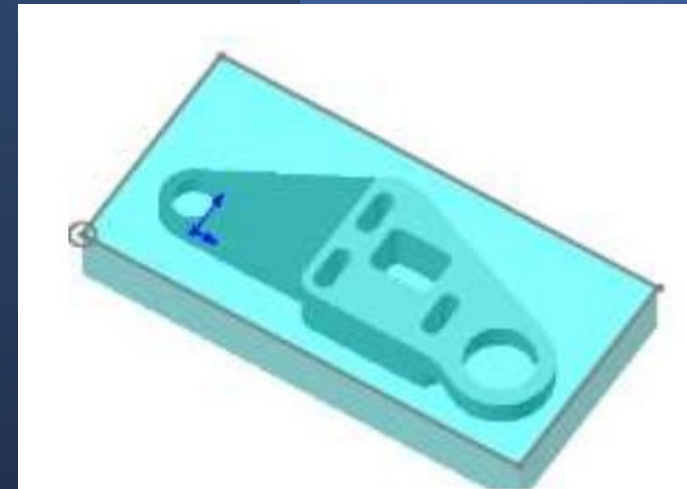
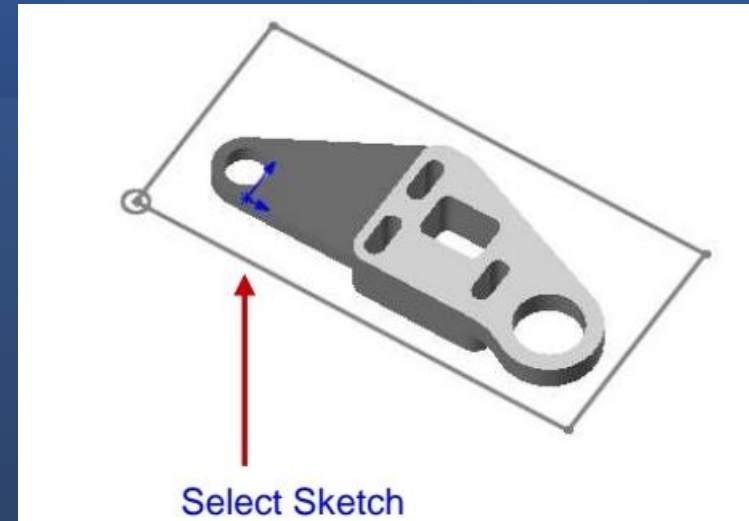
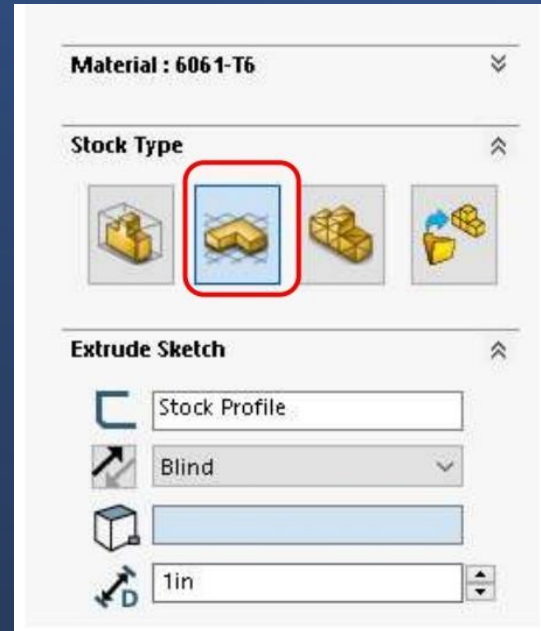
Define tool dia & length offsets from
 Tool Post processor

Subroutines
 Output subroutines for patterned features

Parameter	Value
Program number	1001
Part Thickness	40.0000mm
5axis Arc Deviation	0.02540mm

2 Axis Mill Basics

Stock Manager Dialog box



2 Axis Mill Basics

Define Machinable Features

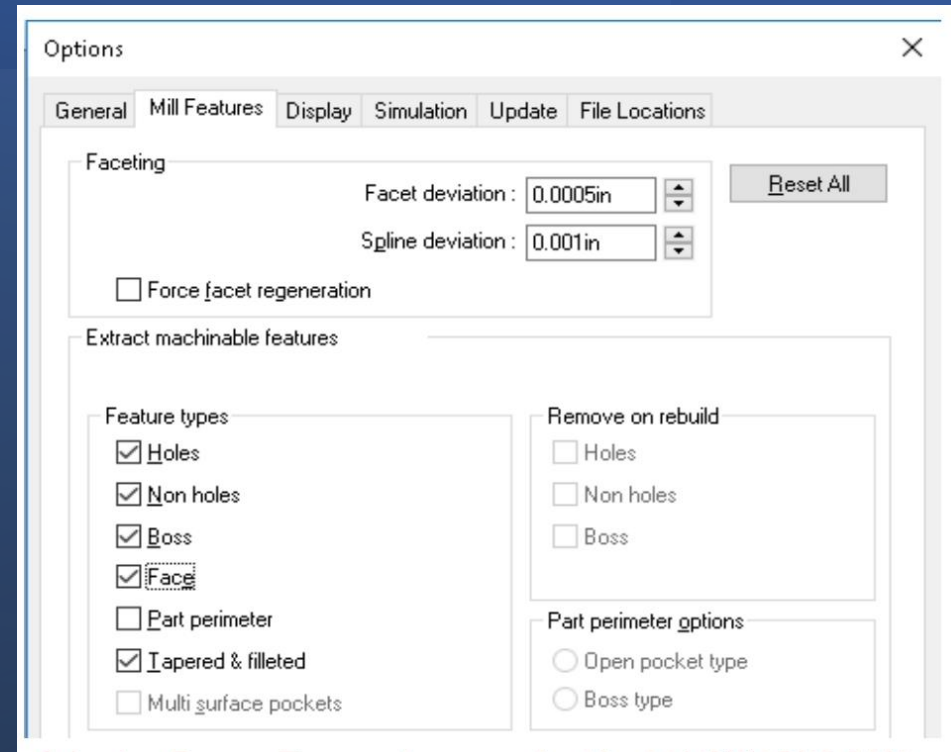
Defining machinable features automatically:



Hole Group

2 Axis Mill Basics

Define Machinable Features



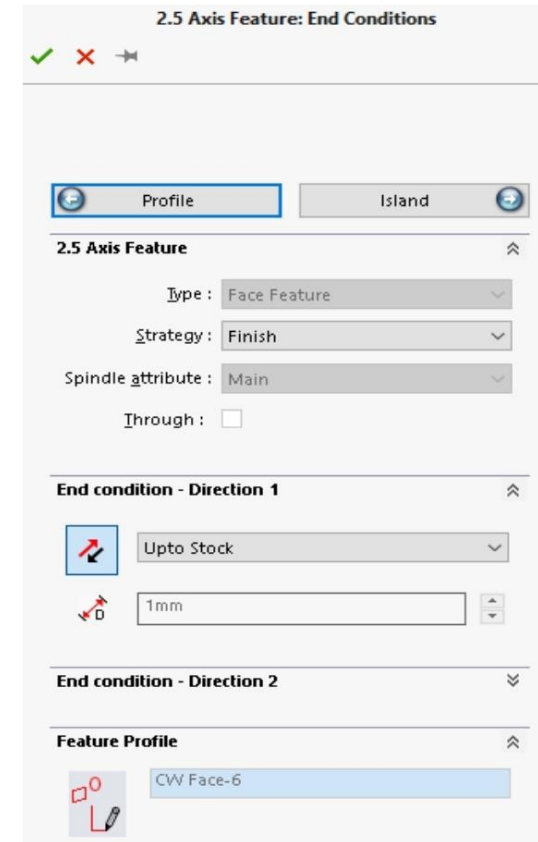
Selecting Feature Types to be recognized by SOLIDWORKS CAM when EMF command is executed

2 Axis Mill Basics

Define Machinable Features

Defining Features Interactively

2.5 Axis Feature: End conditions dialog box

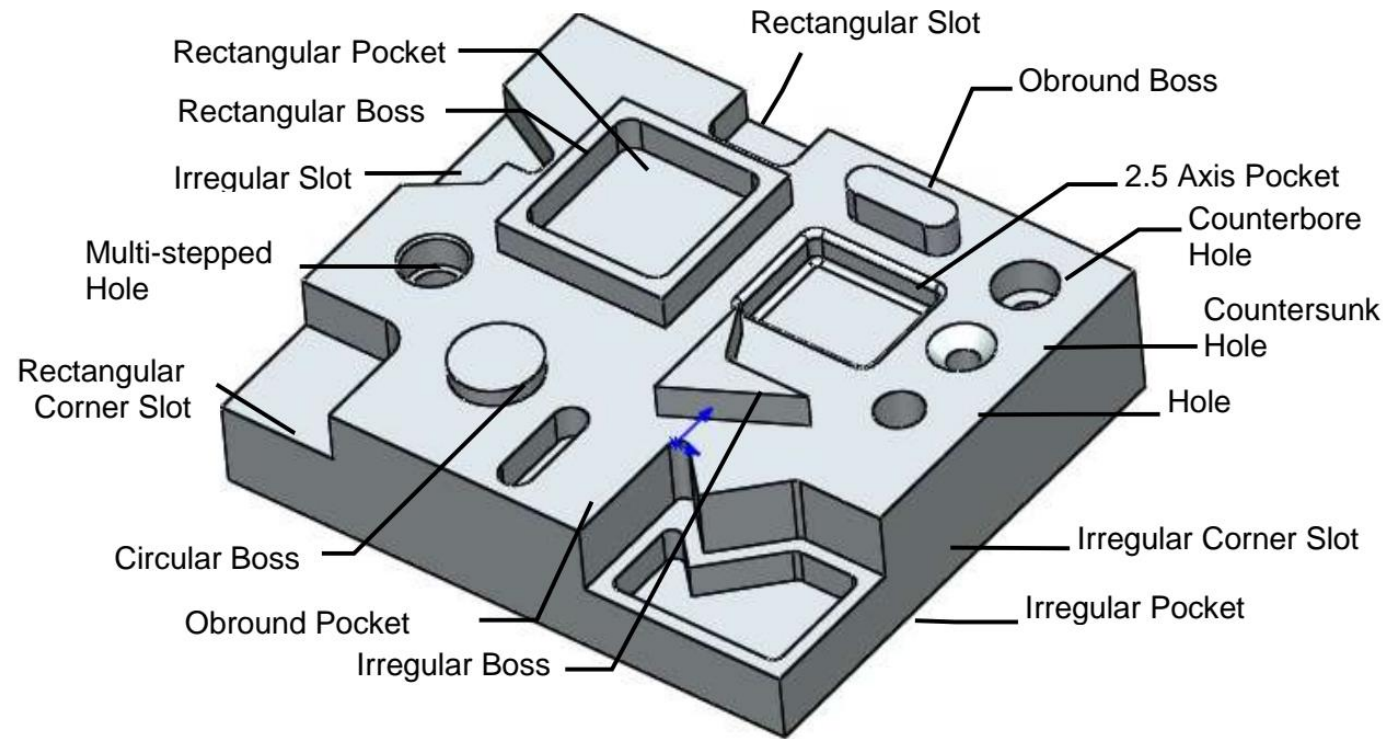


2 Axis Mill Basics

2.5 Axis Mill Features

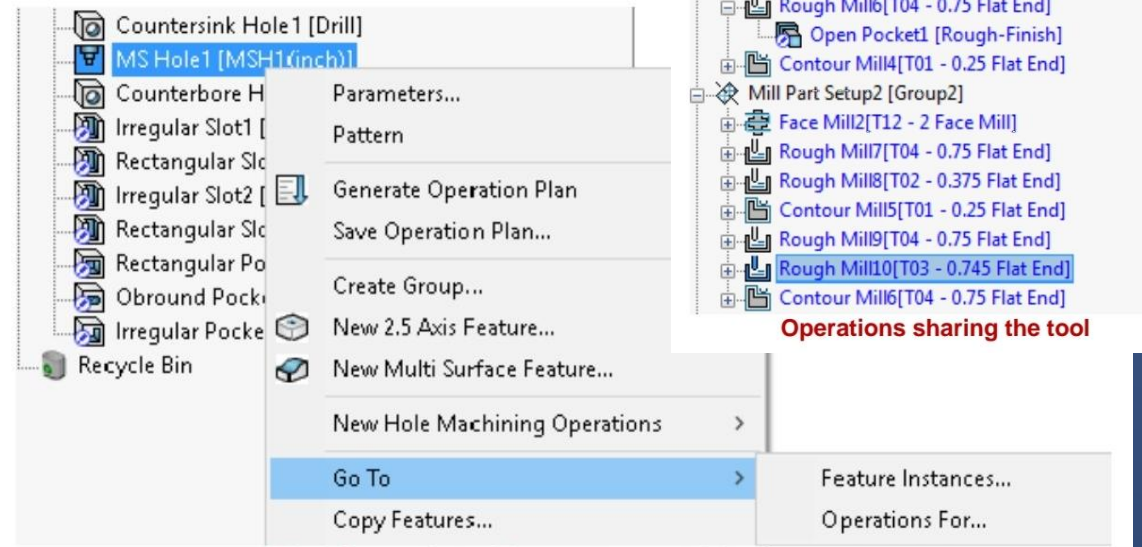
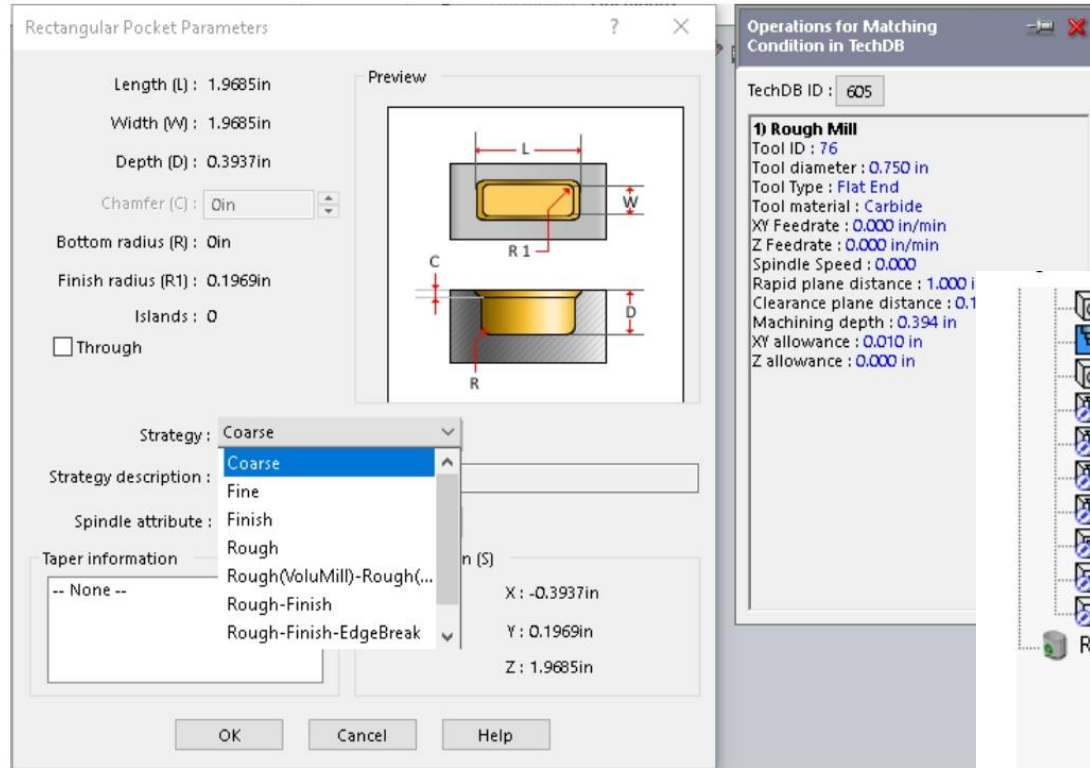
Feature types

- Holes
- Non holes
- Boss
- Face
- Part perimeter
- Tapered & filleted
- Multi surface pockets



2 Axis Mill Basics

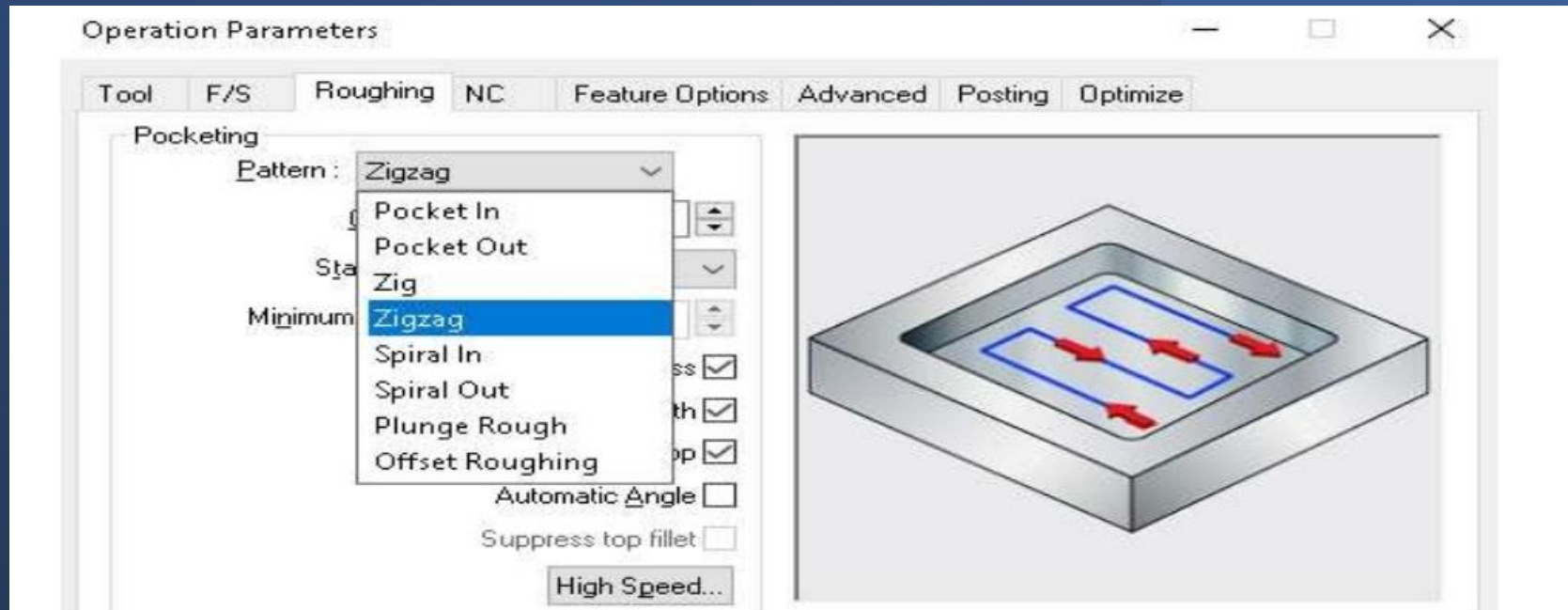
Generate Operation Plan



Strategy set to Coarse for Rectangular Pocket feature in Parameters dialog box

2 Axis Mill Basics

Adjusting Toolpath Parameters

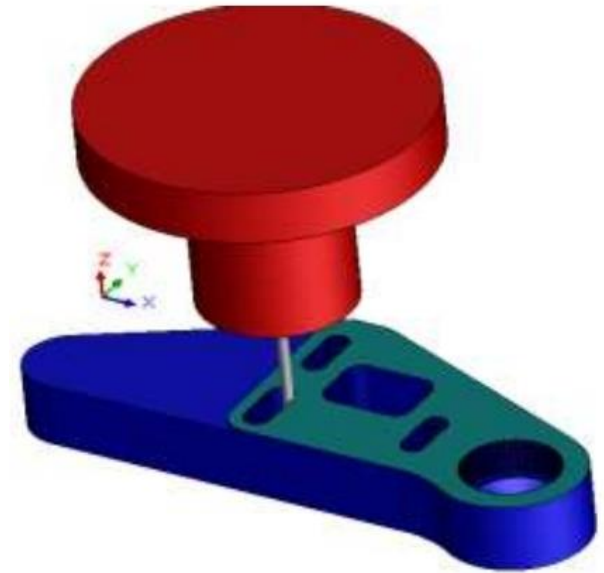
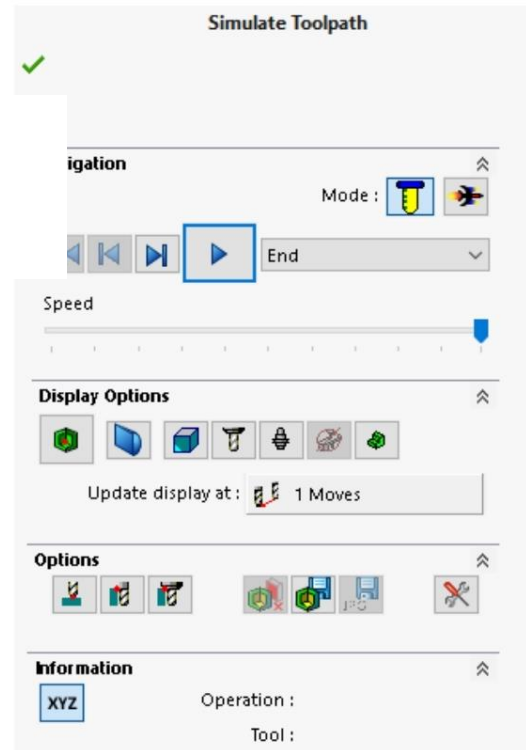
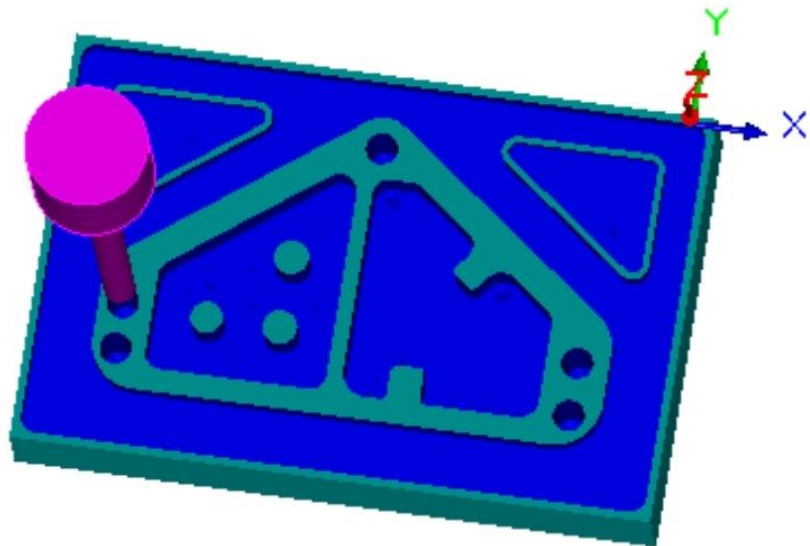


Roughing tab of Operation Parameters dialog box

2 Axis Mill Basics

Simulate Toolpath

Simulate Toolpath Dialog box



2 Axis Mill Basics

Post Process Toolpaths

Post Process

Size : 62.09 KB

NC Code

STATION	TOOL TYPE	DIAMETER	CORNER RADIUS	DESCRIPTION
{	Q05	ENDMILL	020.00	20MM CRB 2FL 38 LO
{	Q02	ENDMILL	010.00	10MM CRB 2FL 22 LO
{	Q13	CENTER DRILL	020.00	20MM X 90DEG CRE
{	Q14	DRILL	020.00	20.0mm JOBBER DRILL
{	Q03	ENDMILL	012.00	12MM CRB 2FL 25 LO
{	Q04	ENDMILL	016.00	16MM CRB 2FL 32 LO
{	Q01	ENDMILL	006.00	6MM CRB 2FL 19 LO

Options

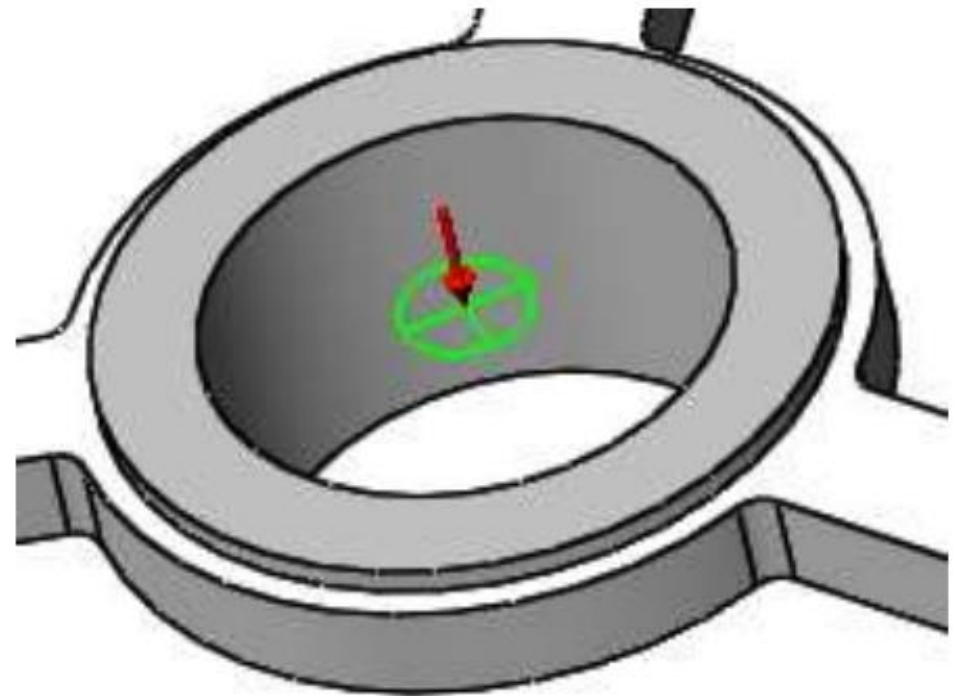
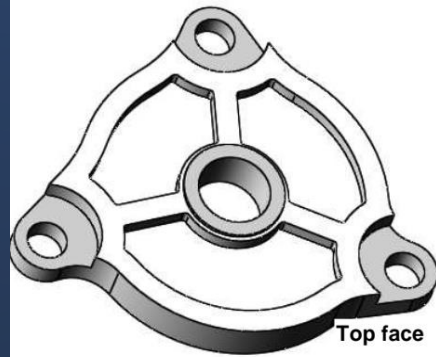
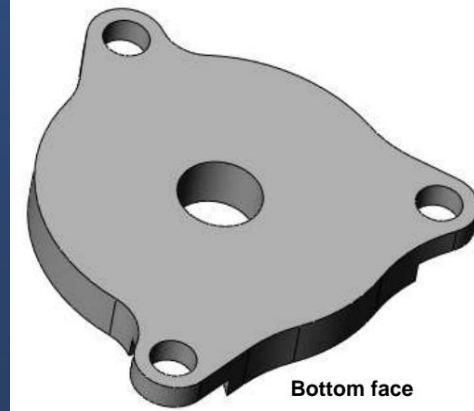
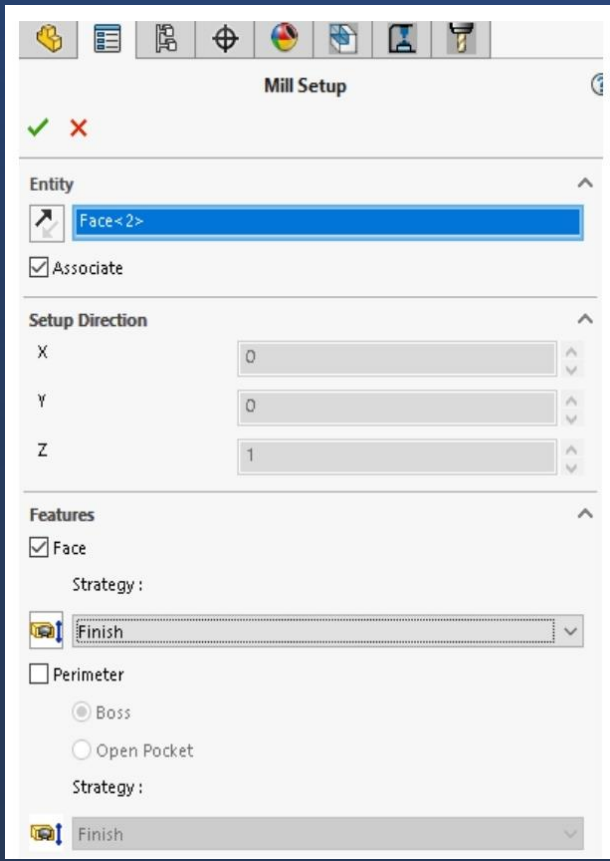
Post Processor Details

Controller : C:\ProgramData\SOLIDWORKS\SOLIDWORKS CAM 202

Parameter	Value
Machine Name	MILL TUTORIAL
Controller Type	FANUC TYPE
Z Home	508.00000mm
Traverse Rate	250

Mill Part Setups

Top face



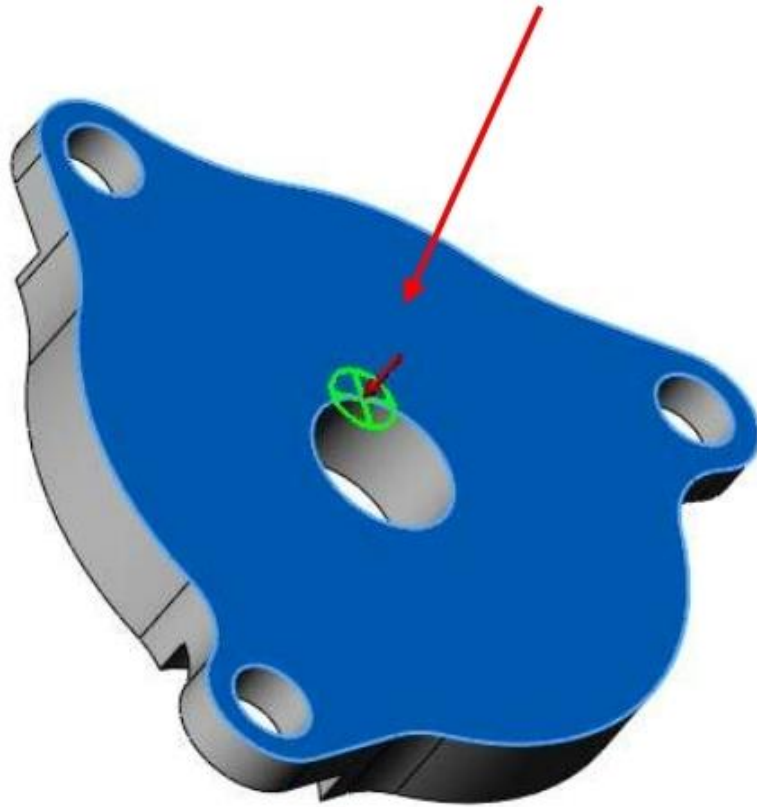
Machining direction indicated by triad

2 Axis Mill Basics

Mill Setup Dialog box

2 Axis Mill Basics

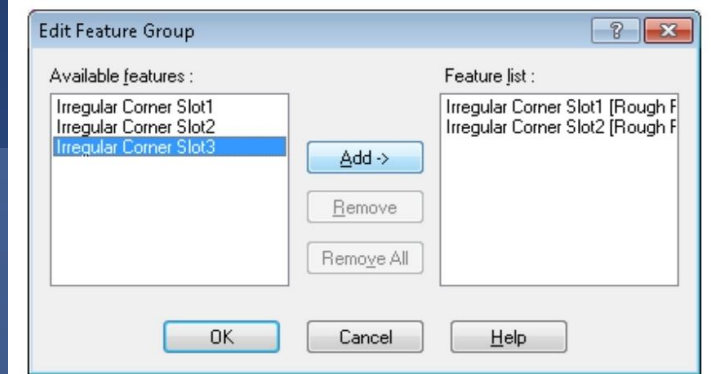
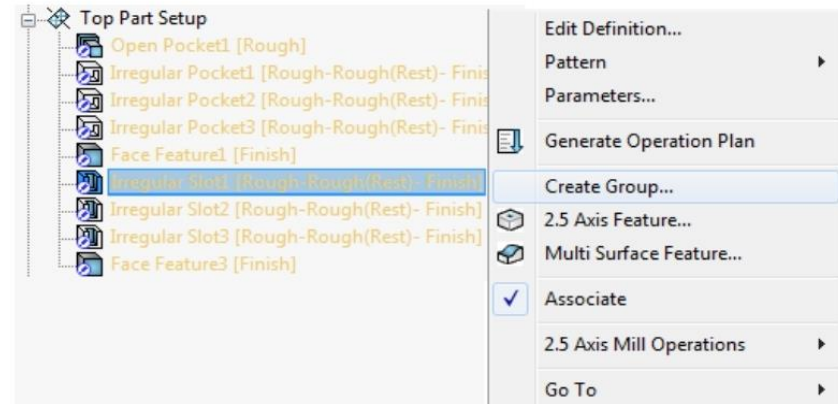
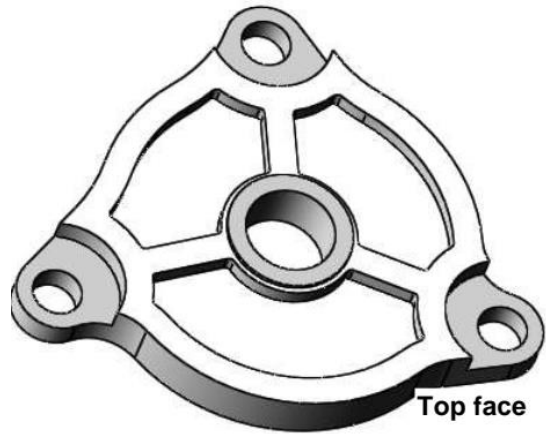
Inserting Additional Mill Part Setups



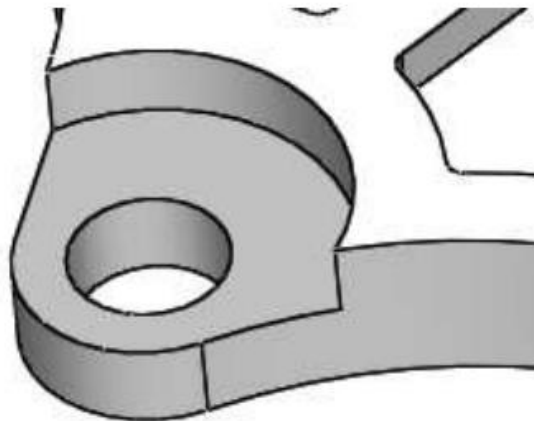
Underside of the part

2 Axis Mill Basics

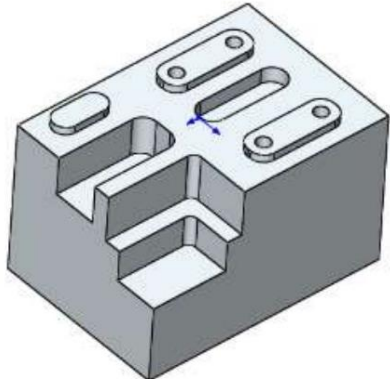
create a Group Feature:



Edit feature Group Dialog Box

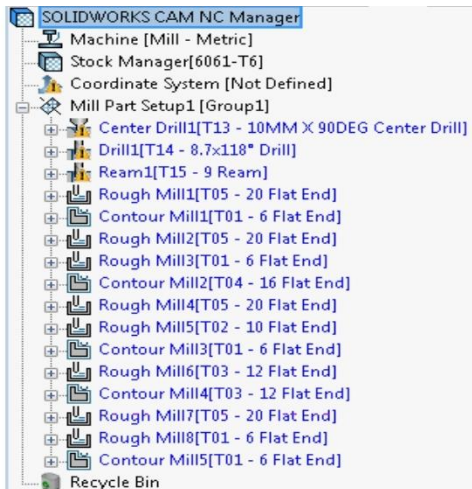


2 Axis Mill Basics

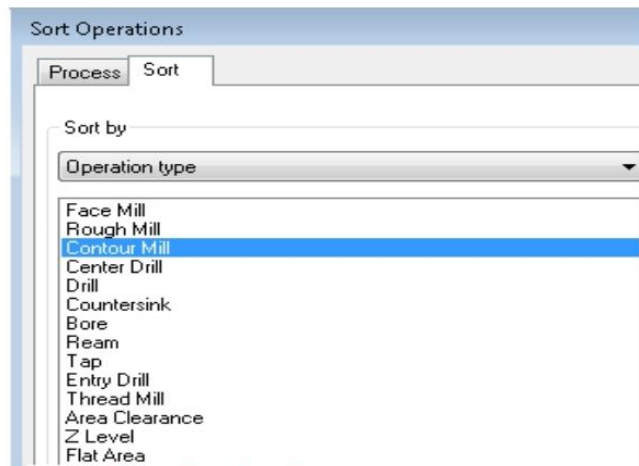


Features recognized by AFR

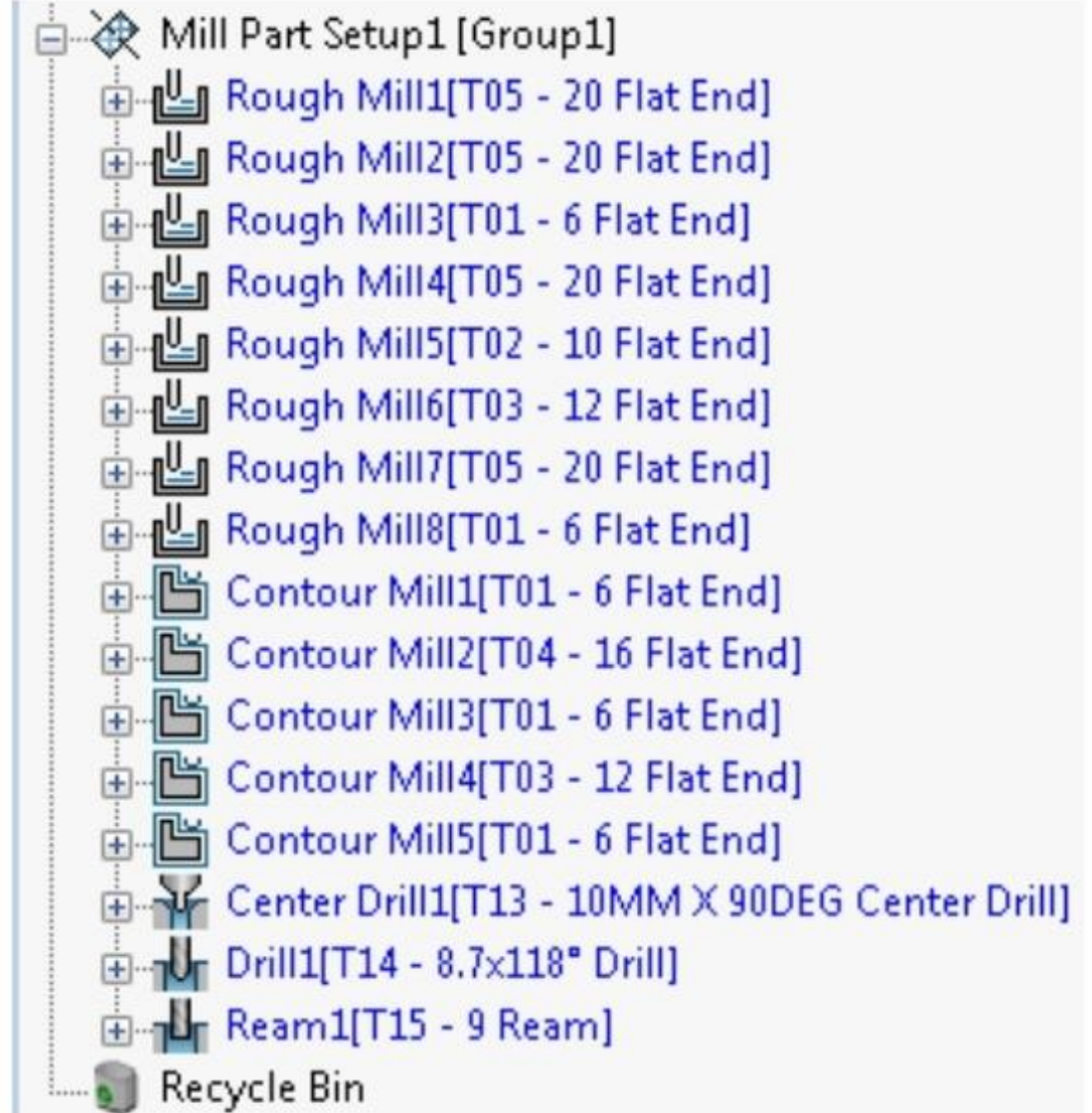
Sorting and Sequencing Operations



Operations generated using GOP command

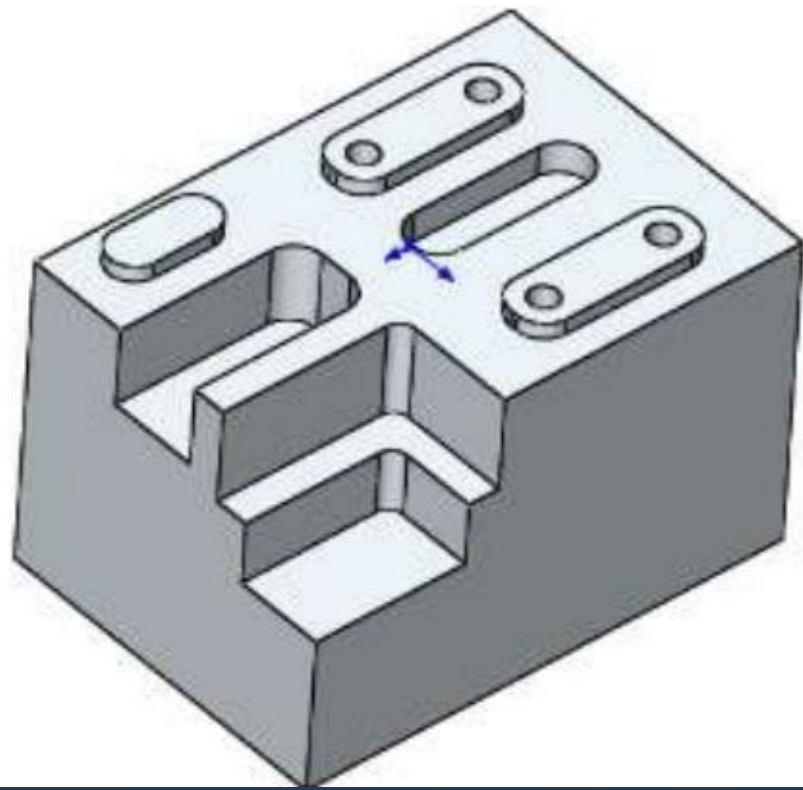


New Sorting Sequence

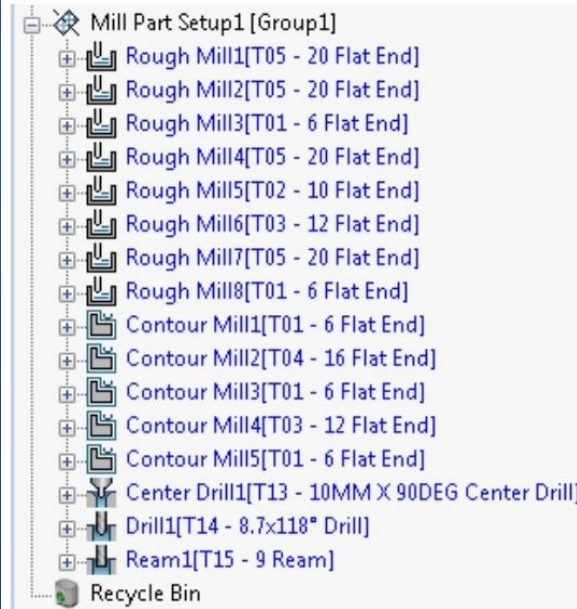


Operations after sorting

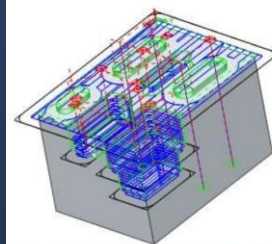
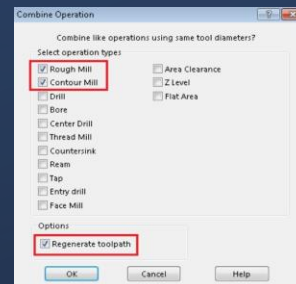
2 Axis Mill Basics



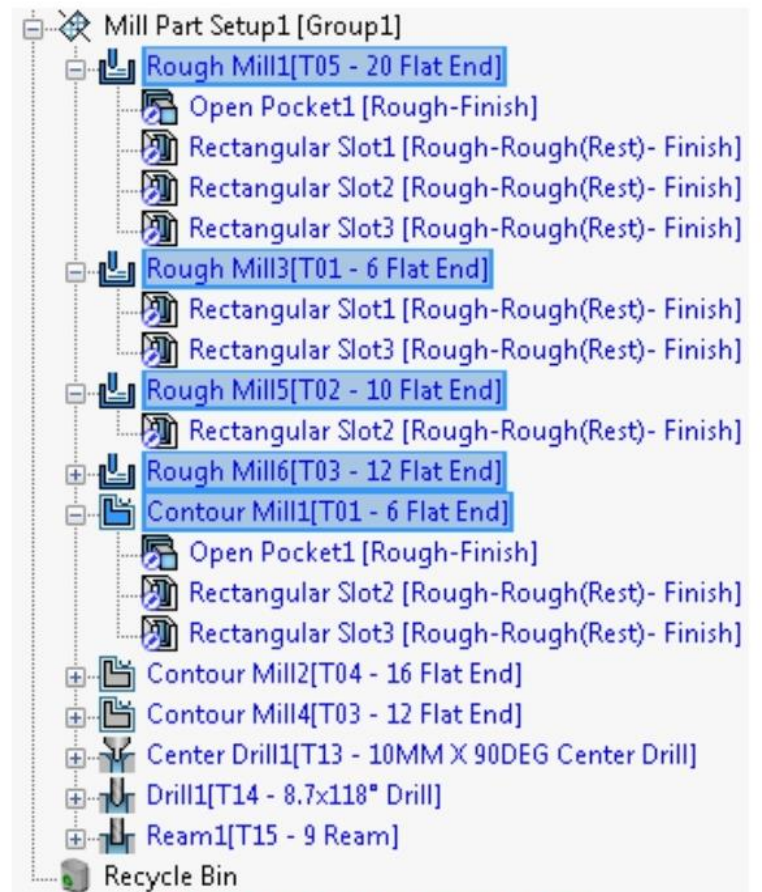
Combining Operations



Operations after sorting



Toolpaths generated for all operations



Operations after combining