

# *Focus Series 2025*

Total CAD/CAM solution for ZW3D



► About **FOV**

► **Focus Series**

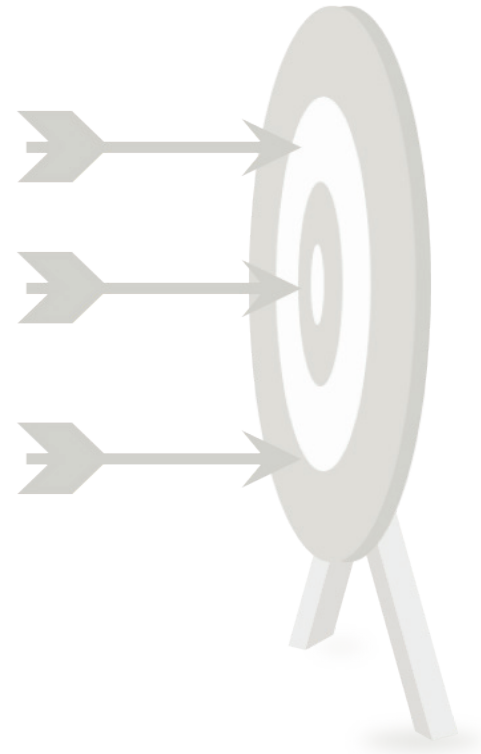
Basic Focus

Modeling Focus

Electrode Focus

Face-Edit Focus

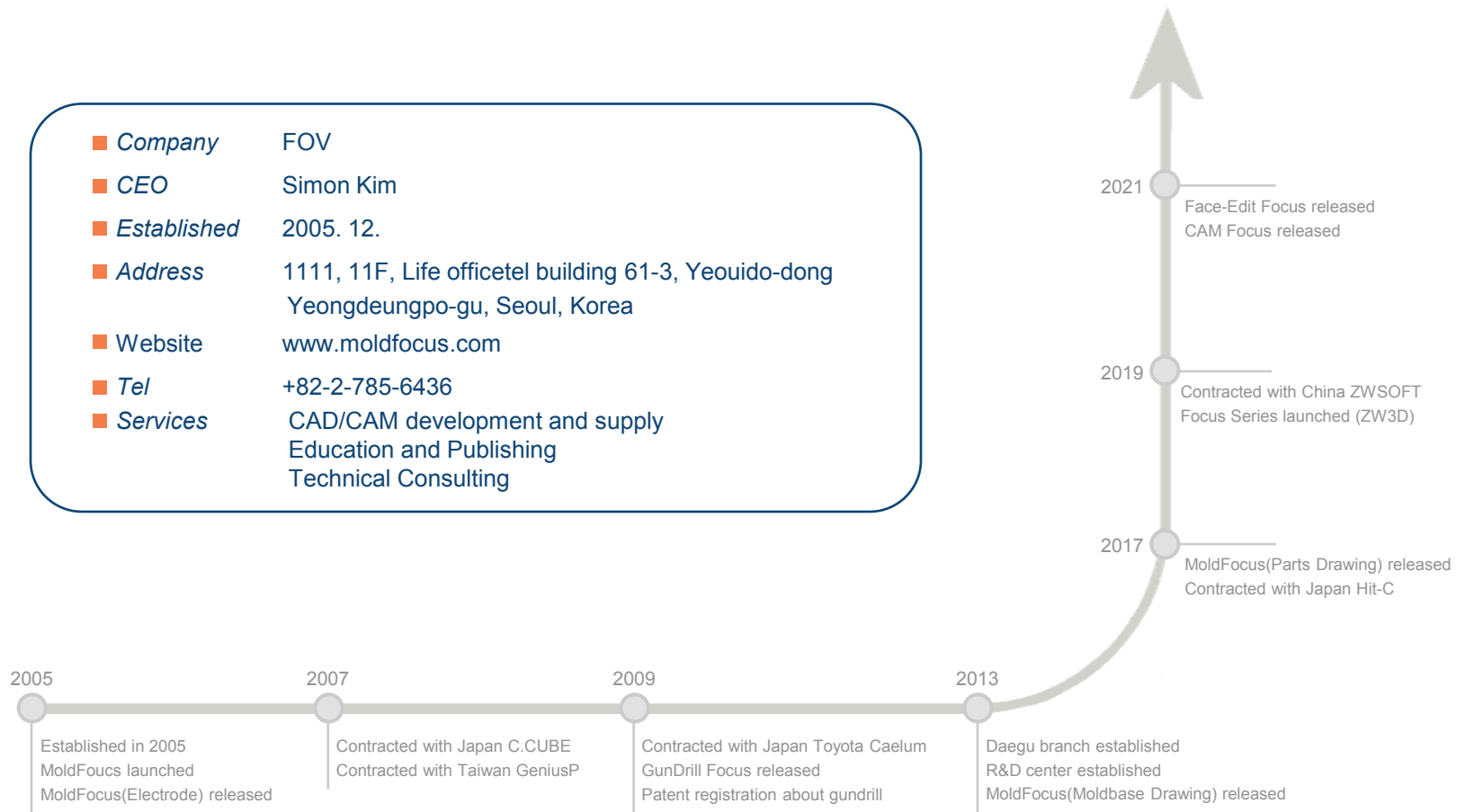
CAM Focus



# About FOV

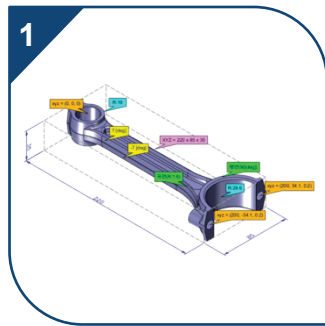
Providing valuable products to our customers is our philosophy.

■ Company	FOV
■ CEO	Simon Kim
■ Established	2005. 12.
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■ Website	www.moldfocus.com
■ Tel	+82-2-785-6436
■ Services	CAD/CAM development and supply Education and Publishing Technical Consulting



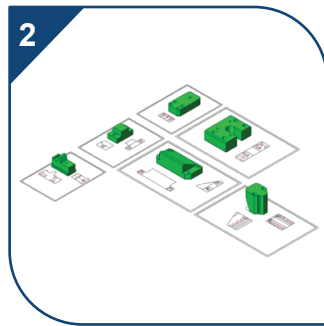
**Focus Series** is a CAD/CAM solution that is run in ZW3D

To help improve manufacturing production efficiency, **Focus Series** offers a variety of solutions.



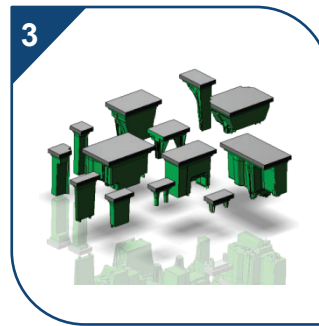
## Basic Focus

- ✓ **Viewer solution**
- ✓ Easy measurement tool
- ✓ Quick entity classification
- ✓ Smart entity editing tools
- ✓ Recommended:  
ZW3D Lite or higher



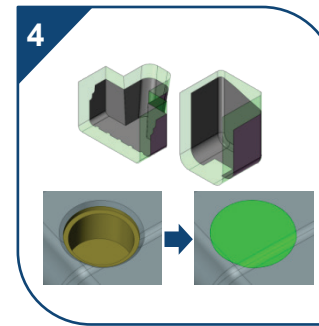
## Modeling Focus

- ✓ **Auto 3D models from 2D**
- ✓ Automatic 2D to 3D conversion
- ✓ Alignment drawing
- ✓ Easy bolt hole modeling
- ✓ Recommended:  
ZW3D Lite or higher



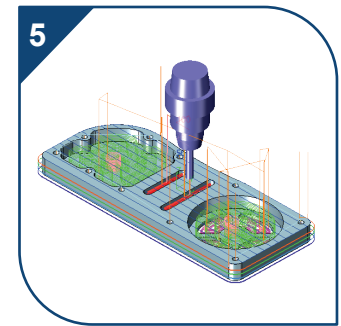
## Electrode Focus

- ✓ **Electrode design solution**
- ✓ Electrode modeling
- ✓ Electrode blank
- ✓ Electrode BOM & drawing
- ✓ Recommended:  
ZW3D Standard or higher



## Face-Edit Focus

- ✓ **Easy face editing for CAM**
- ✓ Automatic hole filling
- ✓ Smart face extension
- ✓ Expansion of corner radius
- ✓ Recommended:  
ZW3D Standard or higher



## CAM Focus

- ✓ **2.5D CAM solution**
- ✓ Easy-to-use interface
- ✓ Curve editing functions for CAM
- ✓ Supporting multiple operations
- ✓ Recommended:  
ZW3D 2-Axis machining or higher



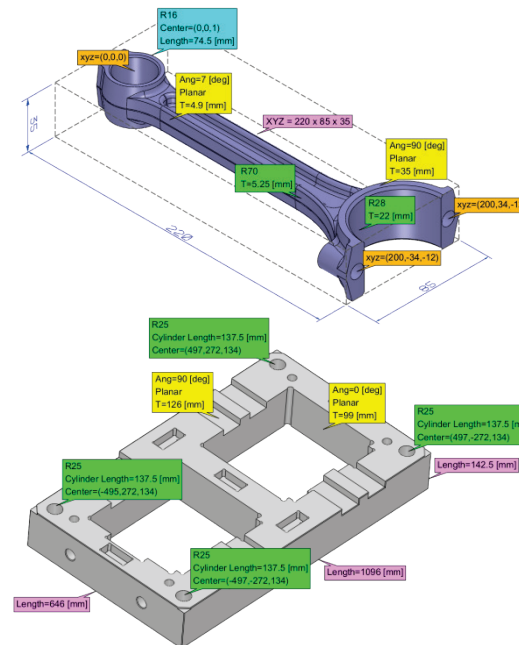
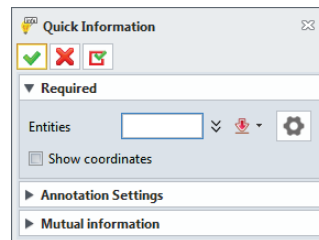
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**Viewer solution** that quickly checks information and edits entities

## Quick Information

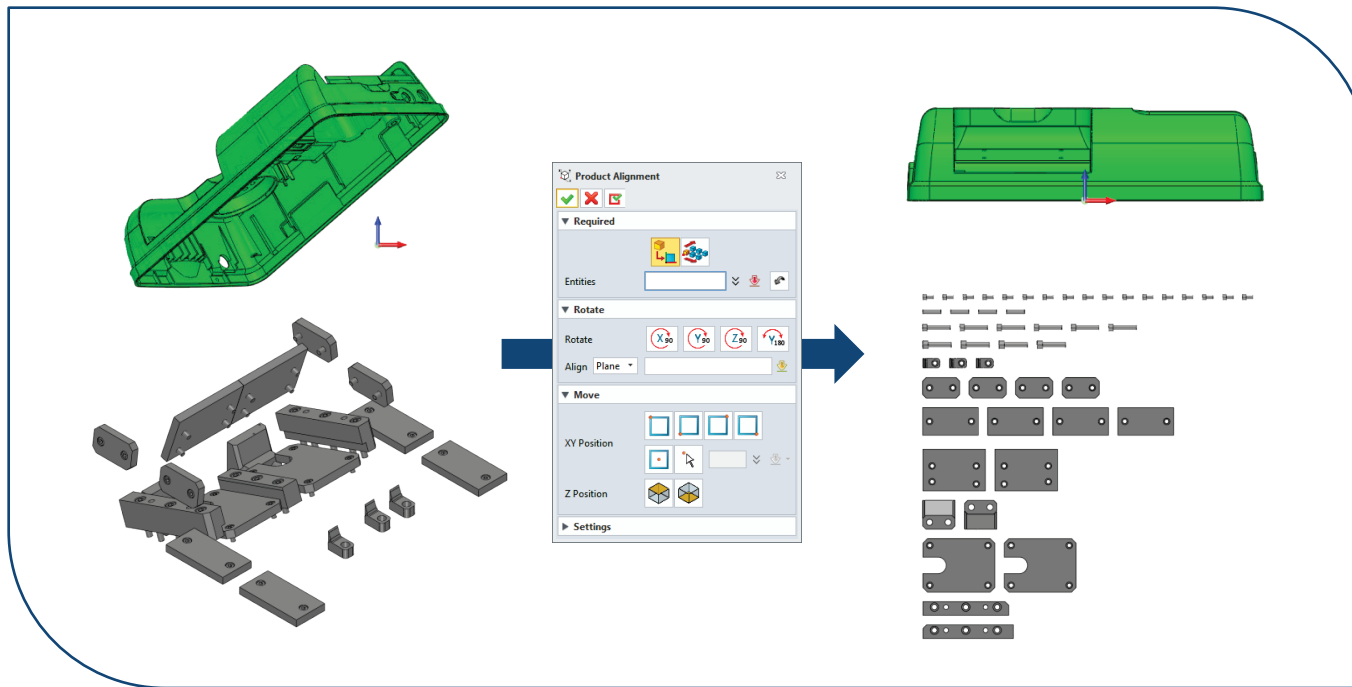
**Easy measurement** function that allows you to check various entity information with only one function.

1



## Product Alignment

**Product Alignment** function that allows you to easily align or sort products with just a click of the icon.

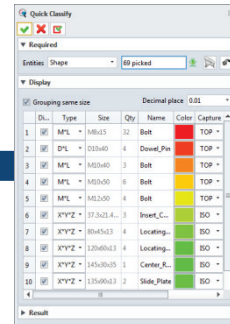
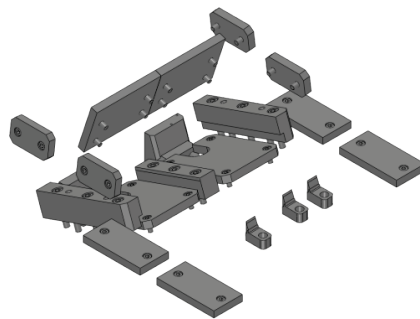


Parts List

Coordinate List

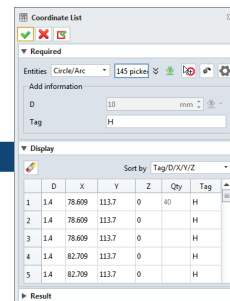
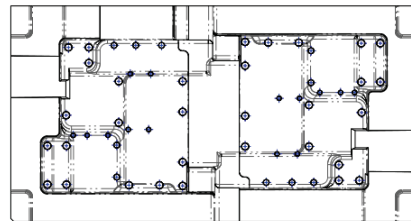
**Quick Classify** function that outputs the name, size, quantity, and image of parts to Excel.

**Coordinate List** function that outputs the diameter, coordinates, and number of circles to Excel.



**Parts List**

Part No.	Part Name	Qty	Image
1	Bolt	32	
2	Dowel Pin	4	
3	Bolt	3	
4	Bolt	6	
5	Bolt	4	
6	Insert Core	3	
7	Locating Block	4	
8	Locating Block	4	
9	Center Rail	1	
10	Slide Plate	2	
11	Slide Stagger	2	
12	Slide Plate	2	



**Coordinate List**

NO	D	X	Y	Z
H1	1.4	78.609	113.7	0
H2	1.4	78.609	113.7	0
H3	1.4	78.609	113.7	0
H4	1.4	82.709	113.7	0
H5	1.4	82.709	113.7	0
H6	1.4	82.709	113.7	0
H7	1.4	88.809	113.7	0
H8	1.4	88.809	113.7	0
H9	1.4	88.809	113.7	0
H10	1.4	94.809	115.4	0
H11	1.4	94.809	115.4	0
H12	1.4	94.809	115.4	0

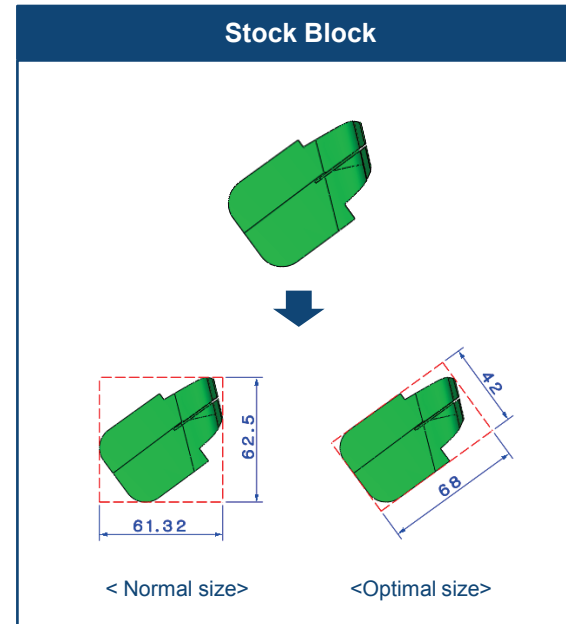
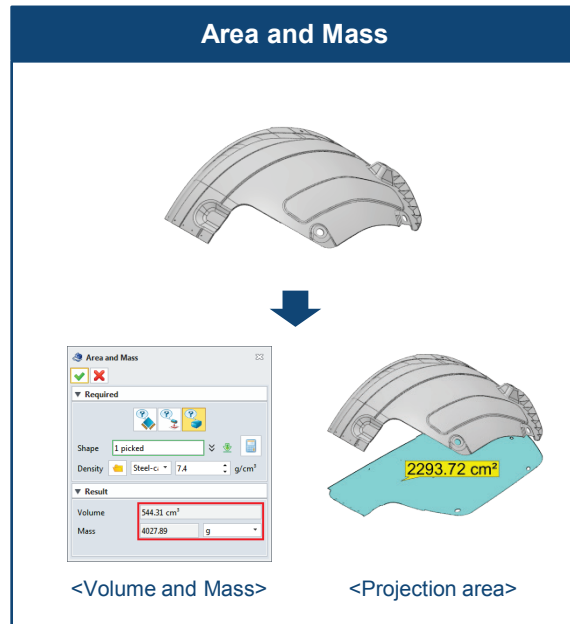


## Area and Mass

## Stock Block

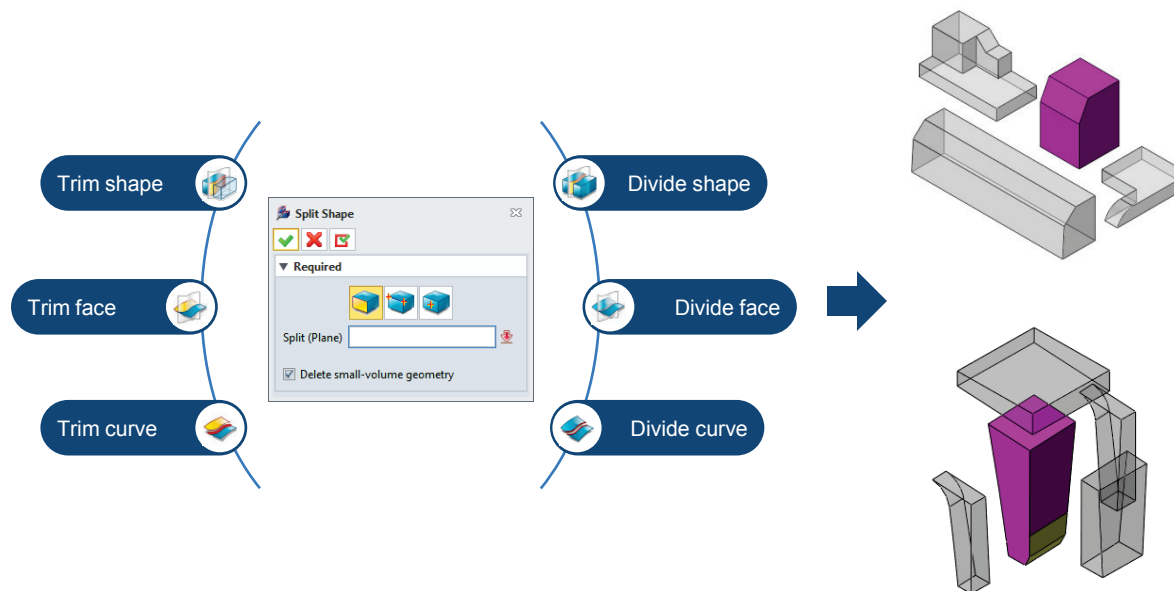
**Area and Mass** function that allows you to check the physical properties quickly (projection area, area, volume, mass).

**Stock Block** function that allows you to figure the optimal size of the workpiece.



## Split Shape

**Split Shape** function that allows you to split shape or face in various methods with only one function.



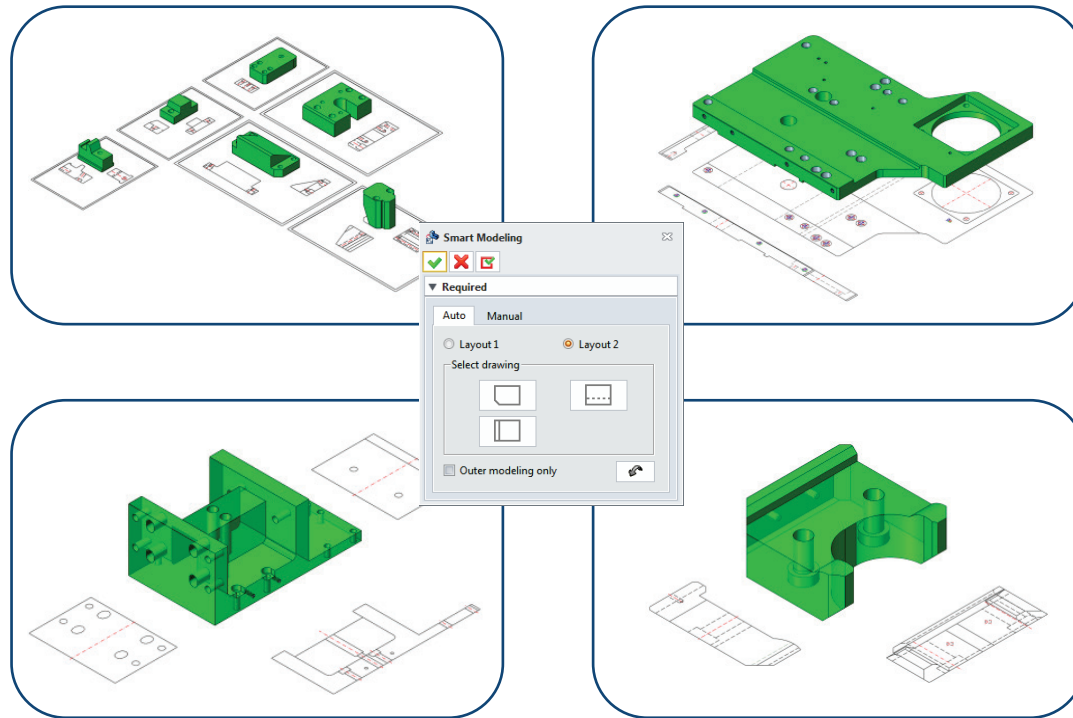
# Modeling Focus

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**Automatic 3D modeling solution** that converts 2D to 3D

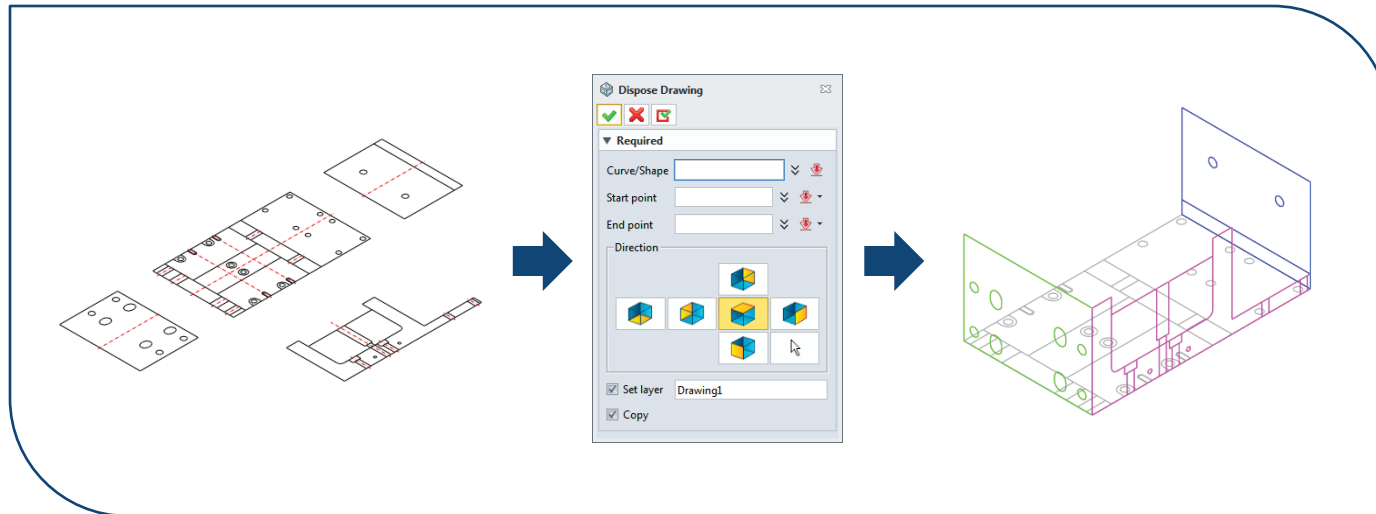
## Smart Modeling

**Automatic 3D modeling** function that allows anyone to convert 2D drawing to 3D model quickly.



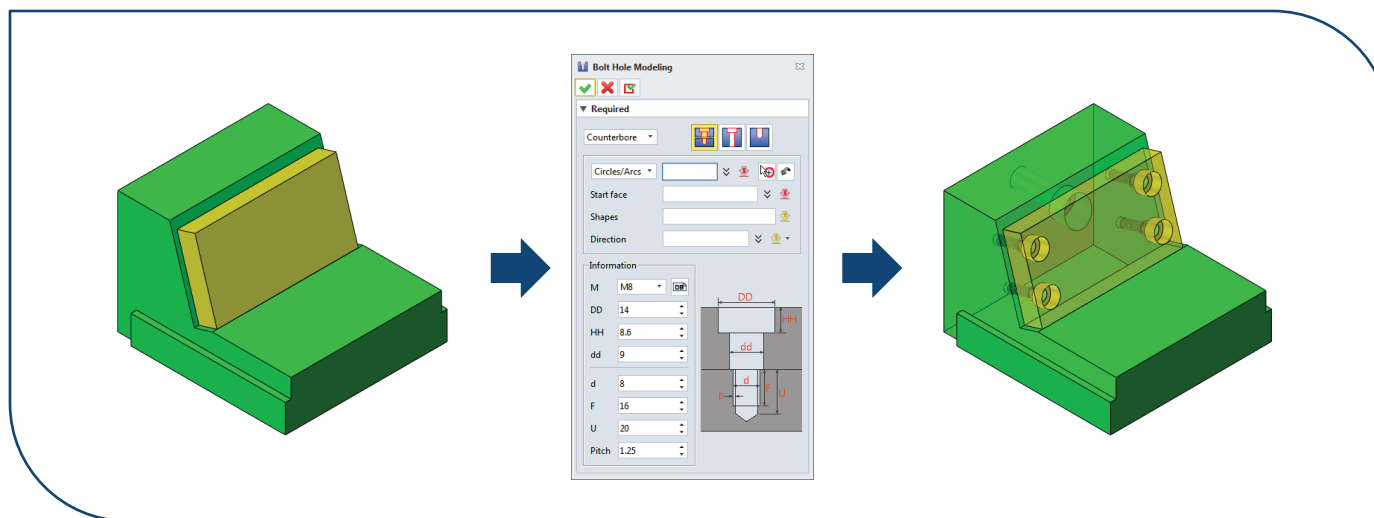
## Dispose Drawing

**Drawing alignment** function that rotates or moves the drawing in the direction user's need.



## Bolt Hole Modeling

**Bolt hole modeling** function that creates variety types of bolt holes using DB.



## **Electrode** Focus

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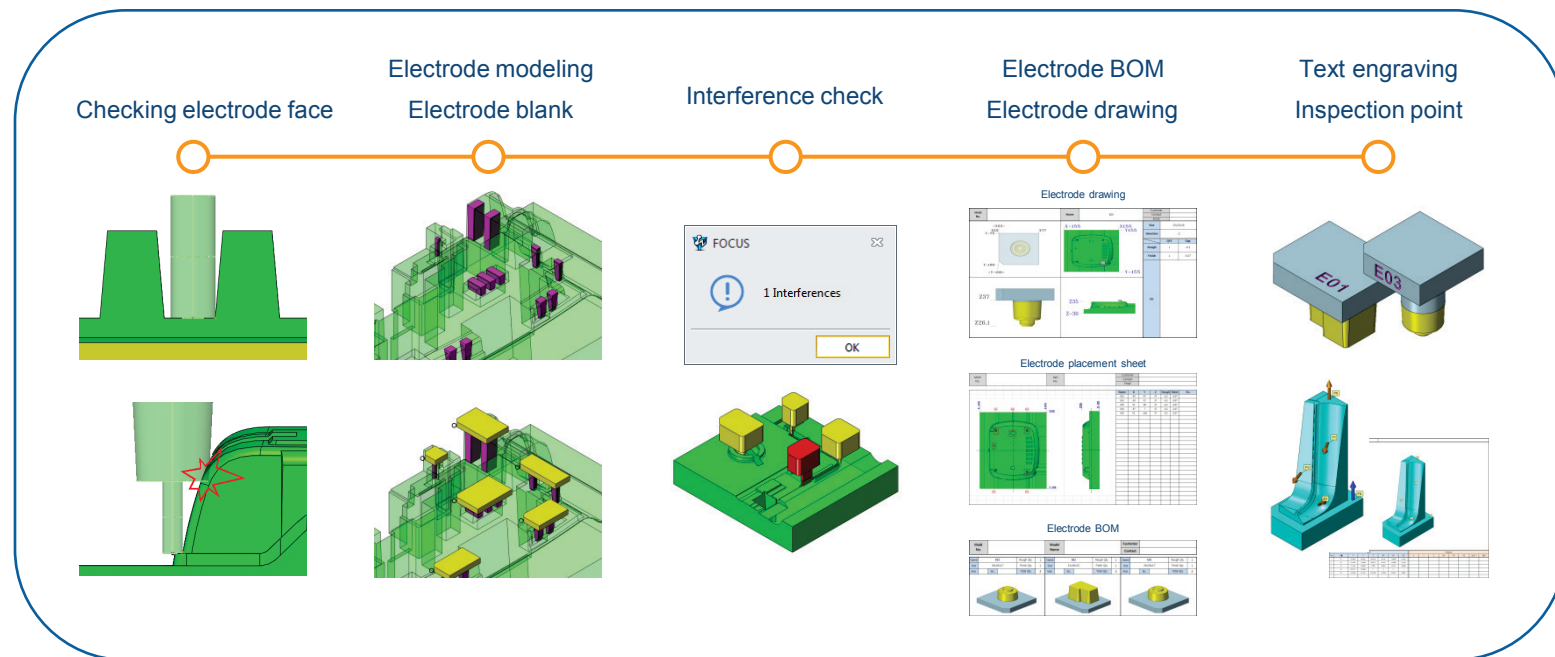
**Electrode design solution** which can streamline and automate electrode modeling, design, validate, and final document.



# Electrode Focus Overview

**Electrode Focus** provides various functions such as checking electrode face, electrode modeling, electrode BOM and etc.

## <Workflow>





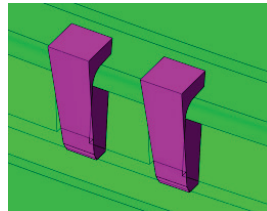
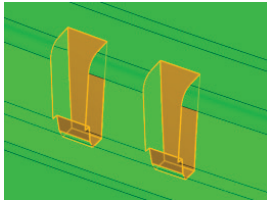
## Electrode modeling

**Electrode modeling** automatically creates electrodes without separating and editing it.

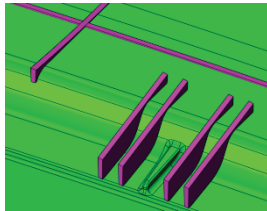
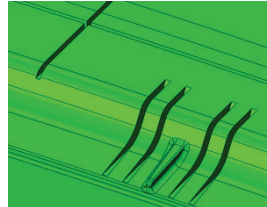
**Rib draft modeling** function creates an inclined rib electrode shape in a rib slot of a constant thickness.

**Smart remove** function can easily remove unnecessary parts while maintaining the electrode face.

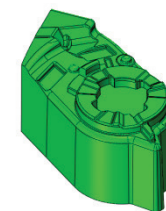
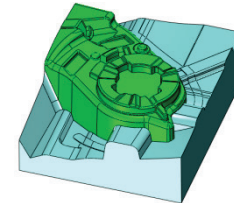
Auto electrode modeling



Rib draft modeling

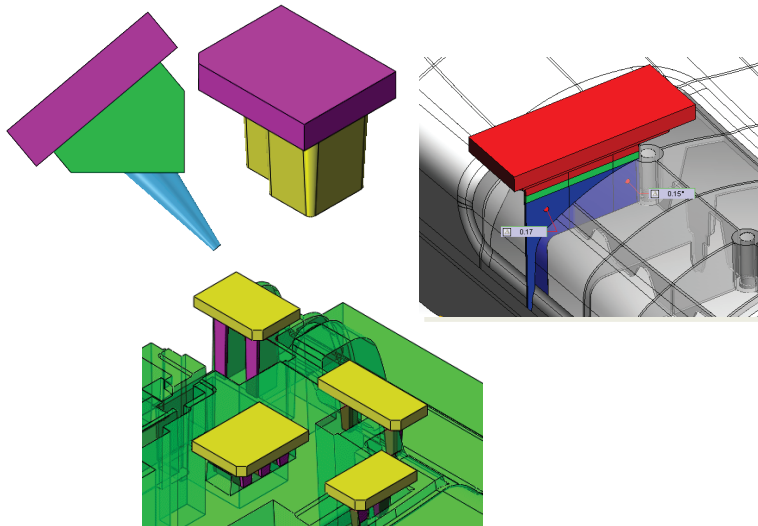


Smart remove



### Electrode blank

**Electrode blank** function adds an electrode blank to the electrode shape and automatically create the appropriate sized blank in the DB.

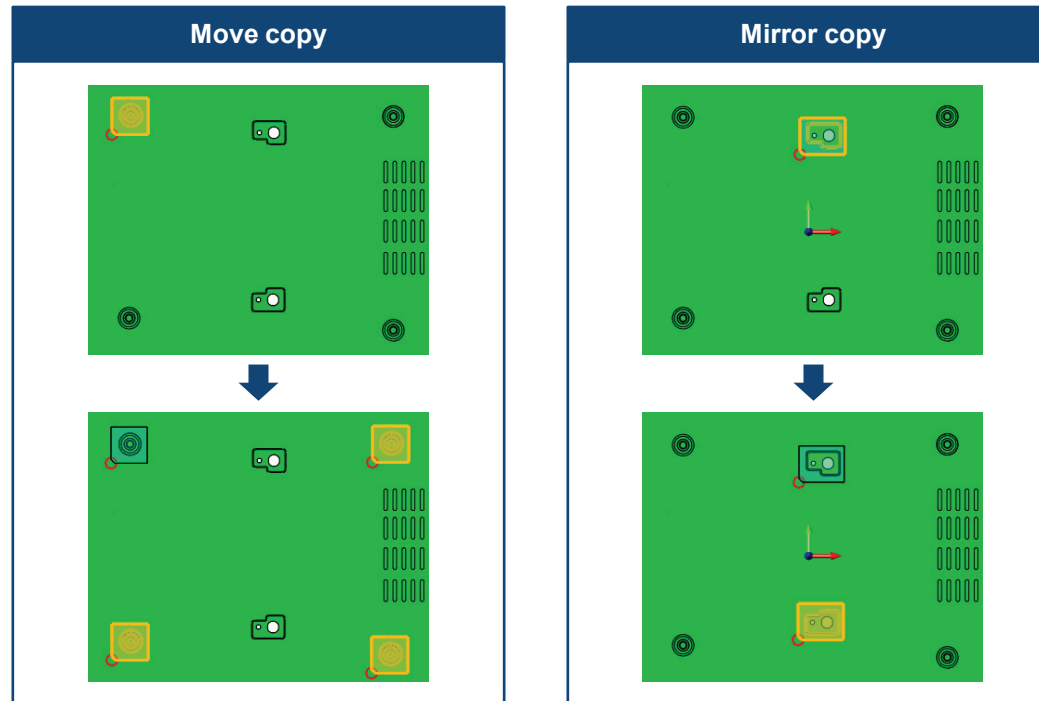


#### You can

- ✓ Automatically creates a rounded-up reference point
- ✓ Support an angle electrode blank for angle electrode shape
- ✓ Blank preview
- ✓ Various methods (set size/ set margin/ use DB) to set blank size
- ✓ Extending the side face of the electrode shape to the blank
- ✓ Support 1 step or 2 step blank
- ✓ Easy settings for reference point and reference face

## Pattern electrode

**Pattern electrode** function duplicates the pre-existing electrode to other locations without further modeling.



Electrode drawing

Electrode placement sheet

Electrode BOM

Angle electrode coordinate

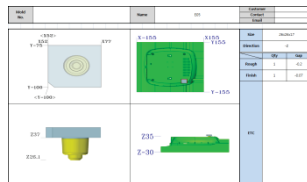
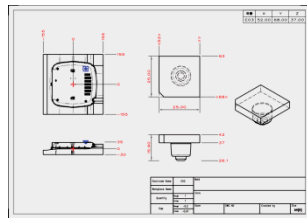
**Electrode drawing** function creates drawings or excel sheets for both CNC and EDM.

**Electrode placement sheet** function shows the position of all electrodes in one drawing.

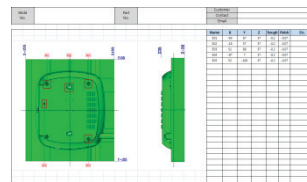
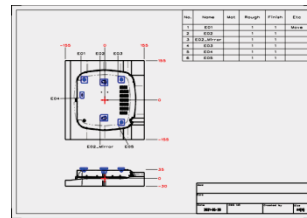
**Electrode BOM** function exports electrode material sheet and part list.

**Angle electrode coordinate** function annotates the coordinates of the start and end point for angular EDM.

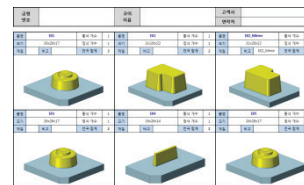
## Electrode drawing



## Electrode placement

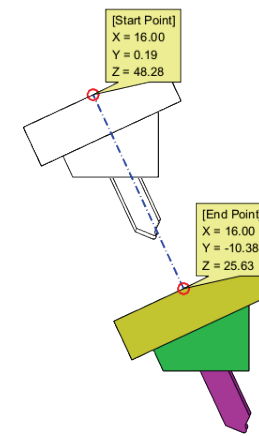


## Electrode BOM



Model		Customer Contact	
No.	Name	Size (mm)	Rough Qty.
1	E01	20 20 17	1
2	E02	10 20 22	1
3	E03_Minner	10 20 22	1
4	E03	20 20 17	1
5	E04	10 20 14	1
6	E05	20 20 17	1

## Angle electrode



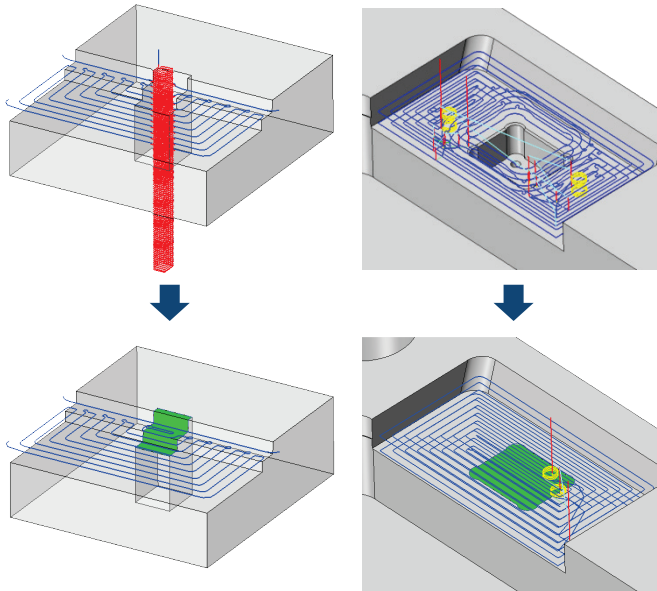
# Face-Edit Focus

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**Face editing solution** for CAM to obtain high quality and efficiency machining

Face-Edit Focus allows CAM operator to edit 3D models easily.

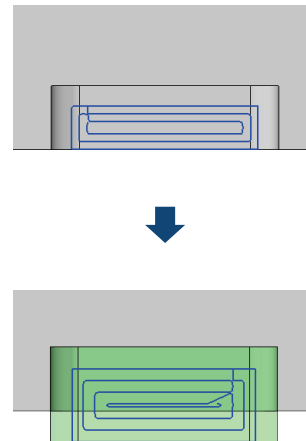
## Filling hole



→ Tool breakage prevention

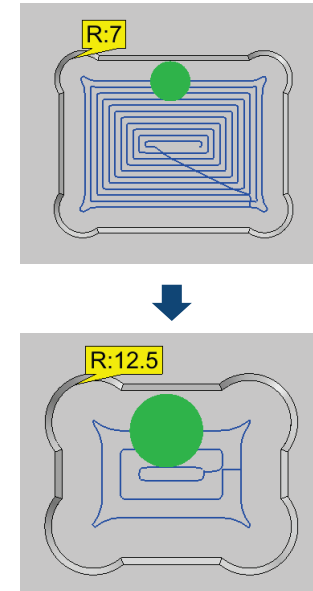
→ Efficient tool path

## Face extension



→ Prevention of undercutting

## Expansion of corner radius



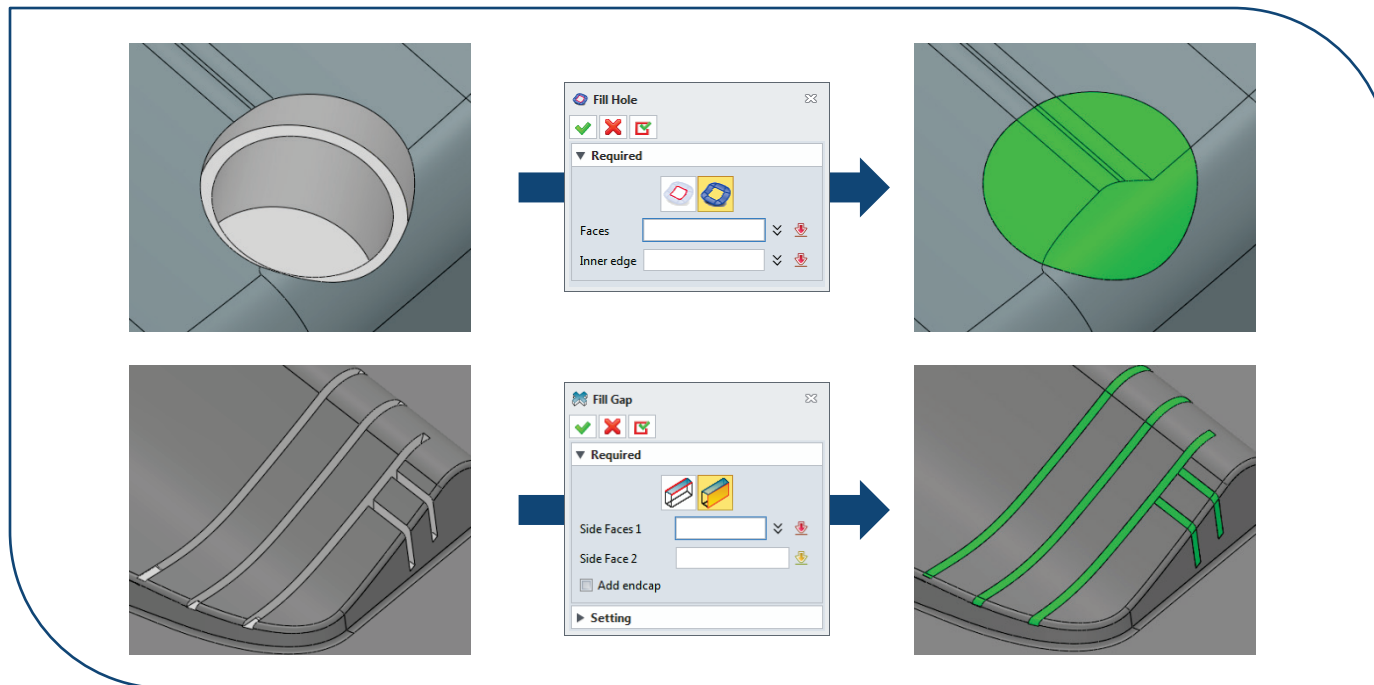
→ Reduced machining time  
by using a larger tool

Fill Hole

Fill Gap

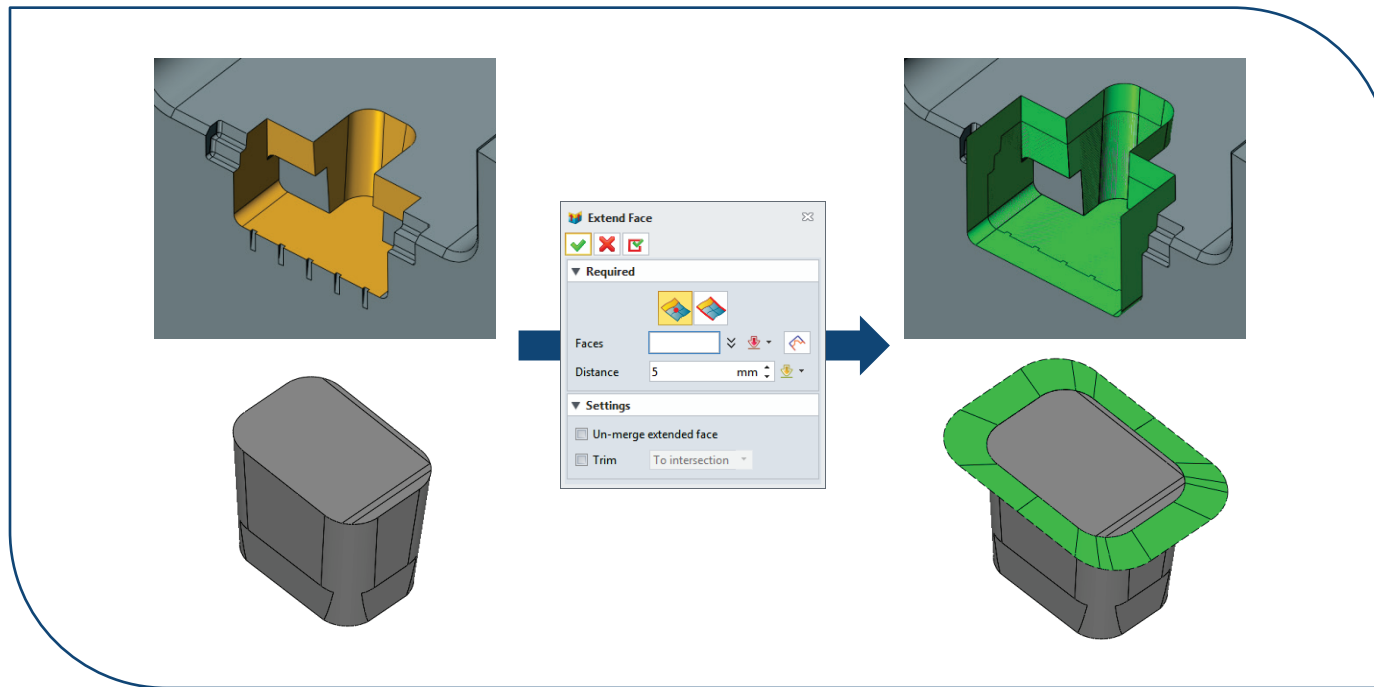
**Fill Hole** function that allows you to fill a complex hole at once just by selecting the faces around the hole.

**Fill Gap** function that allows you to fill the connected rib slot.



## Extend Face-1

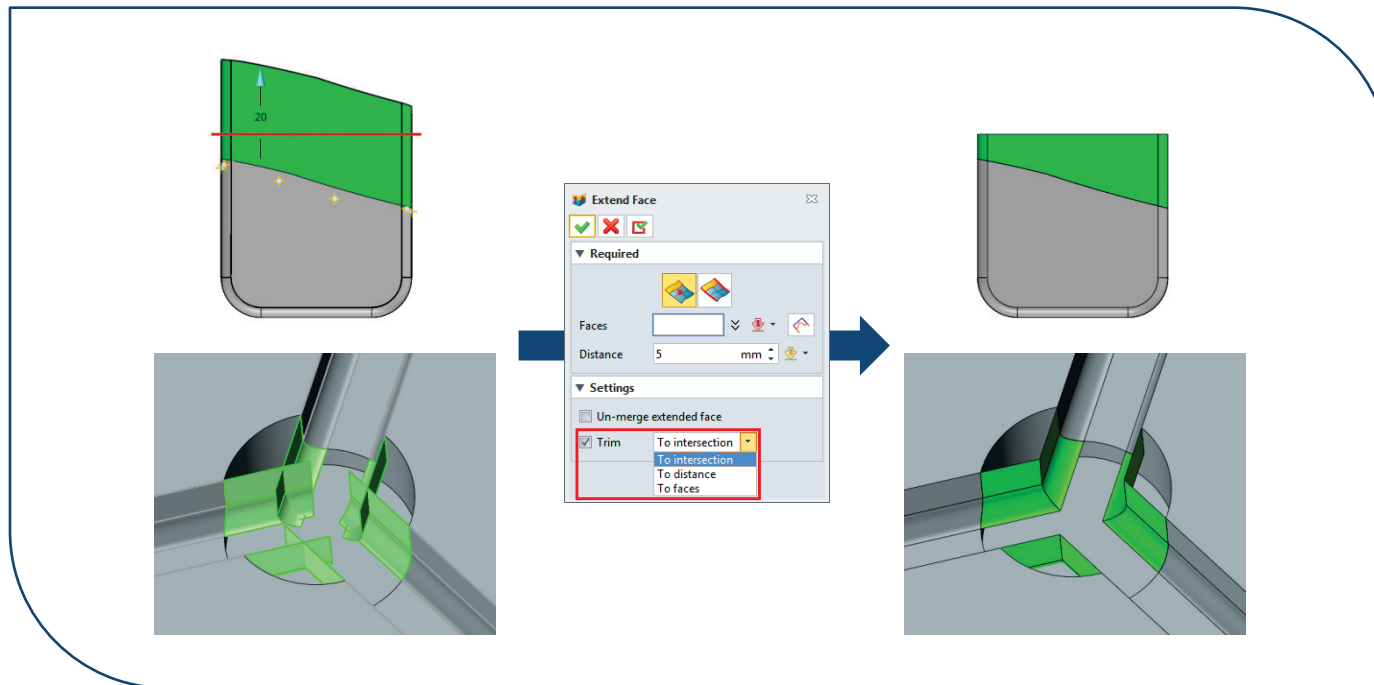
**Smart face extension** that can easily extend the face in a variety of ways.





## Extend Face-2

Automatically trim the extension face to the intersection position, same height, and border face.

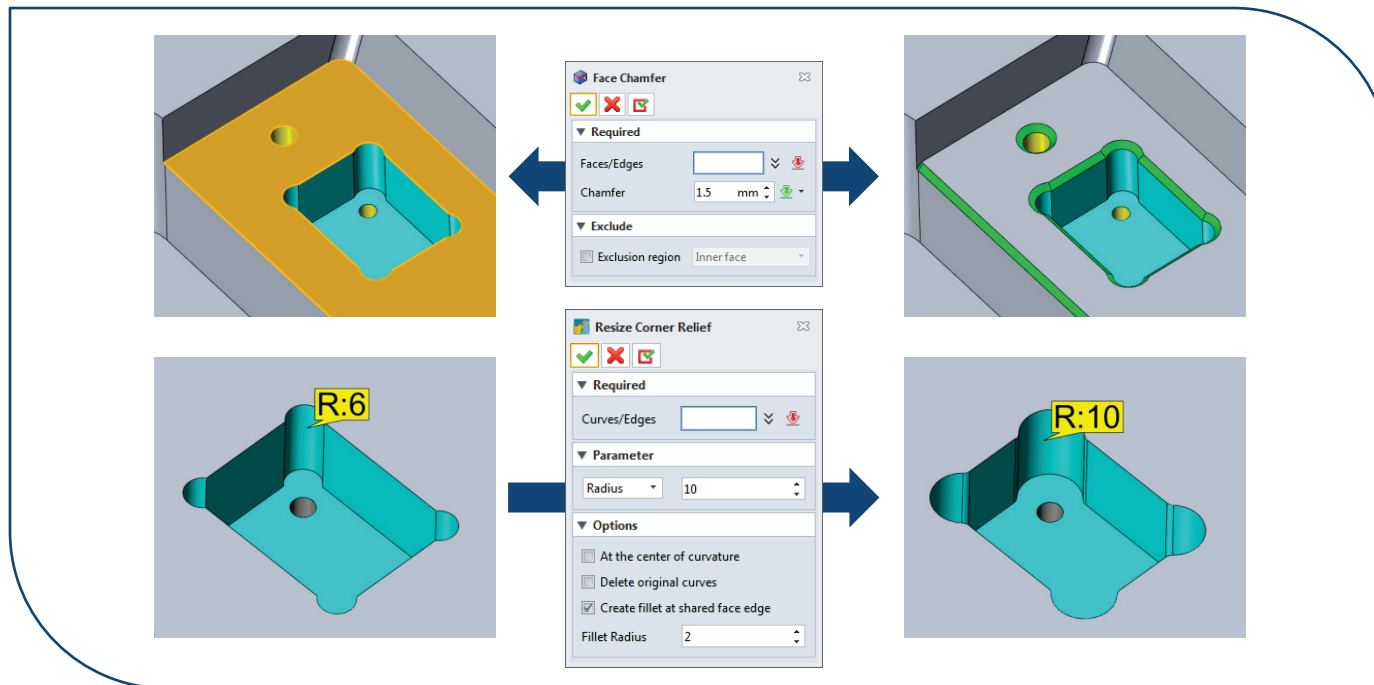


Add/Delete face chamfer

Add/Edit corner relief

**Face chamfer** function to create or remove chamfers at all edges of specified faces

**An easier expansion of corner radius** for efficient machining



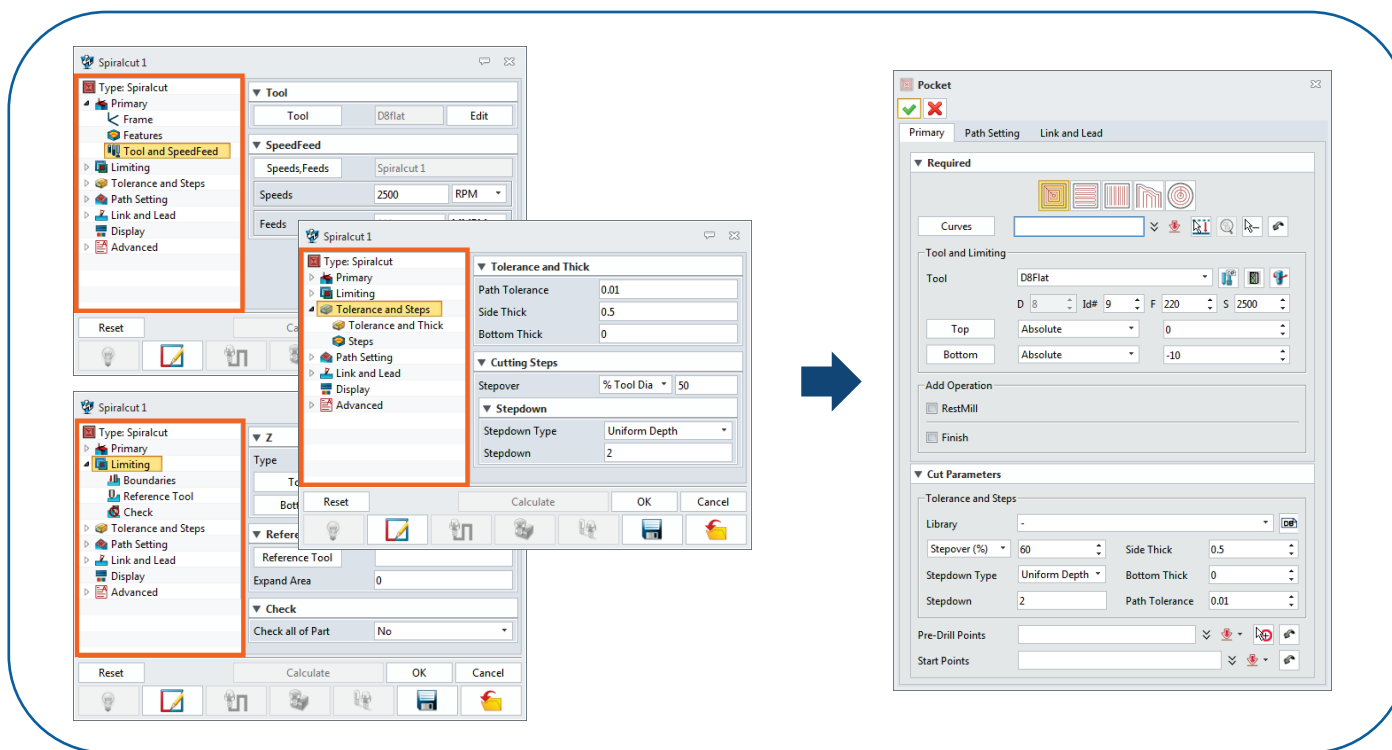


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**2.5D CAM solution** that makes NC data easier and faster

## Easy-to-use interface

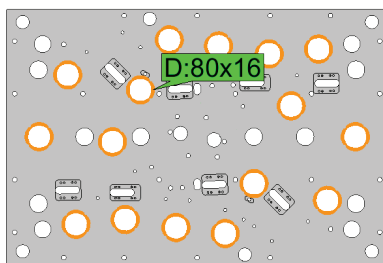
From tree-structured menus to optimized menus to display in **one dialog**



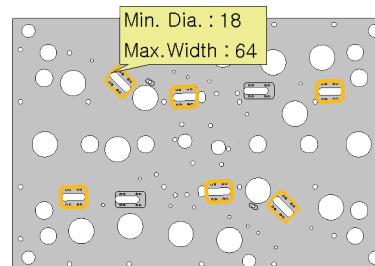
## Easy range selection

Various ways to select a range of machining easily

Same diameter circles



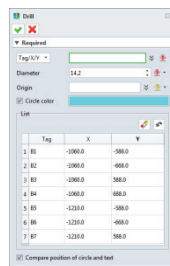
Same size pockets



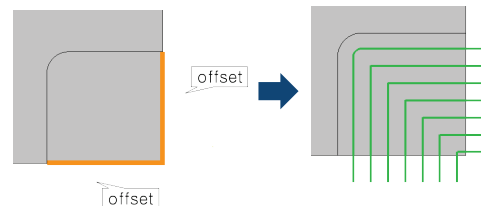
Machining by coordinate texts

```
B: M16X2.0 TAP DP30
B 1 -1060.0 -588.0
B 2 -1060.0 -588.0
B 3 -1060.0 588.0
B 4 -1060.0 588.0
B 5 -1210.0 -588.0
B 6 -1210.0 -588.0
B 7 -1210.0 588.0
B 8 -1210.0 588.0
B 9 -30.0 -588.0
B 10 -30.0 -588.0
B 11 1060.0 -588.0
B 12 1060.0 -588.0
B 13 1060.0 588.0
B 14 1060.0 588.0
B 15 1210.0 -588.0
B 16 1210.0 -588.0
B 17 1210.0 588.0
B 18 1210.0 588.0

C: M6X1.0 TAP DP20
C 1 -302.0 678.0
C 2 -487.0 678.0
```

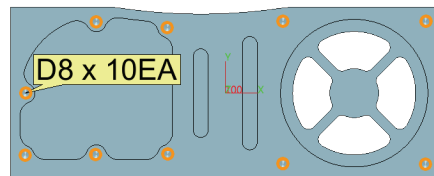
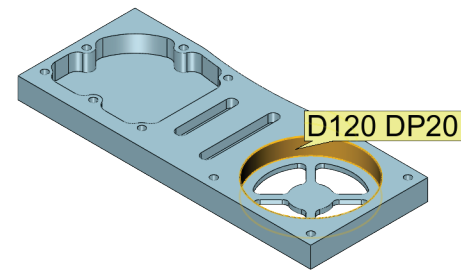
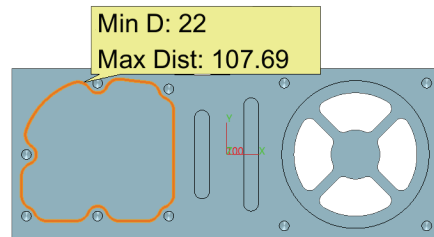
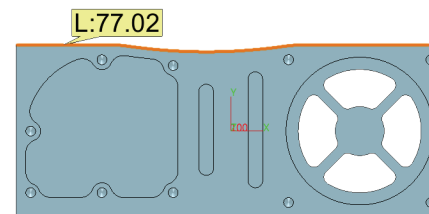


Extension of open contours



**Real-time information**

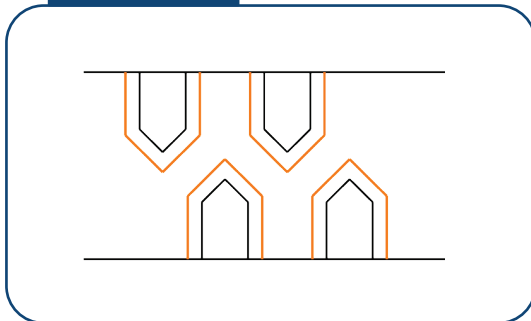
**Real-time display of information** to save time and prevent mistakes

**Circles****Cylinder****Pocket****Curves**

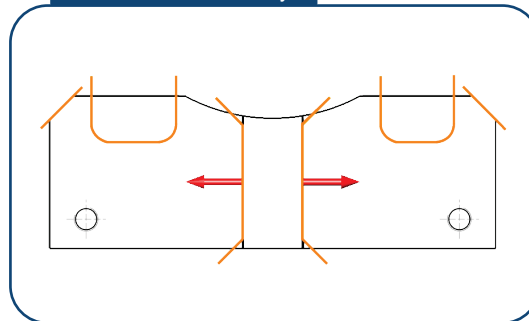
## Editing curves

**Curve editing** functions to create and edit the range of machining easily

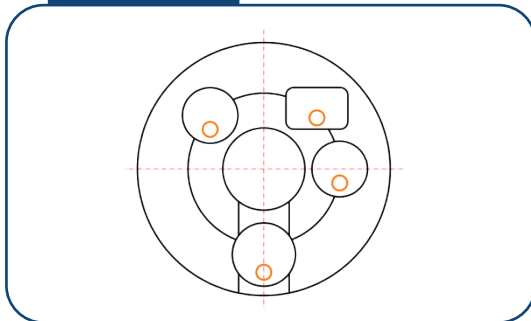
Offset



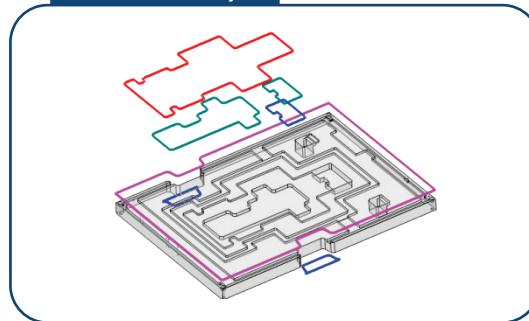
Extension of boundary



Pre-drill circle

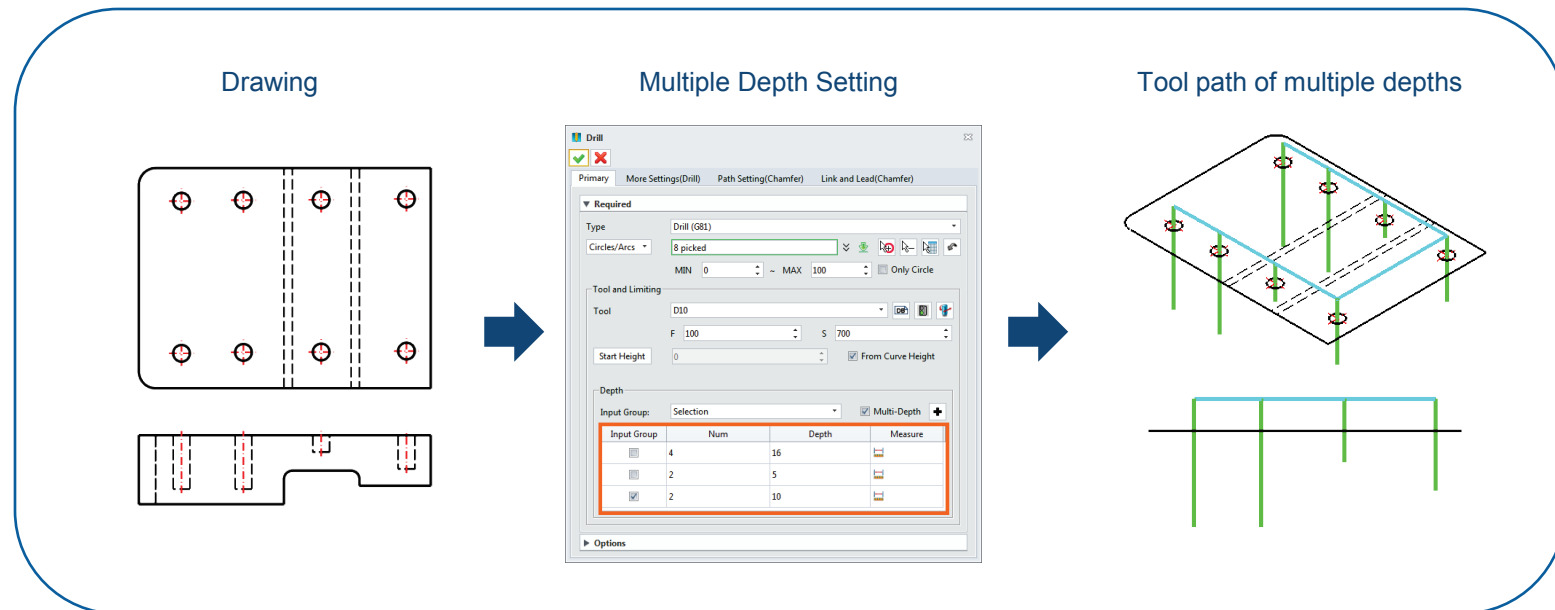


Outer boundary



## Multi-depths drilling

In drilling operations, it provides **multiple depths** setting to register.





## Multi-operations machining

In operations, users can also add **multiple operations** using the options.

- ✓ Drill
- ✓ Drill → Chamfer
- ✓ Center → Drill
- ✓ Chamfer(Center drill) → Drill
- ✓ Center → Drill → Chamfer



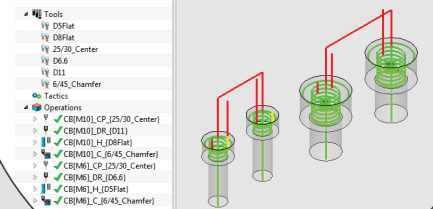
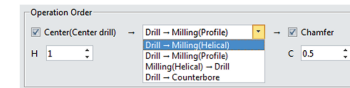
- ✓ Drill → Milling
- ✓ Milling → Drill
- ✓ Drill → Counterbore
- ✓ Drill → Milling → Chamfer
- ✓ Milling → Drill → Chamfer
- ✓ Center → Drill → Milling → Chamfer
- ✓ Center → Milling → Drill → Chamfer



- ✓ Drill → Tap
- ✓ Drill → Tap → Chamfer
- ✓ Drill → Chamfer → Tap
- ✓ Center → Drill → Tap
- ✓ Center → Drill → Tap → Chamfer
- ✓ Center → Drill → Chamfer → Tap



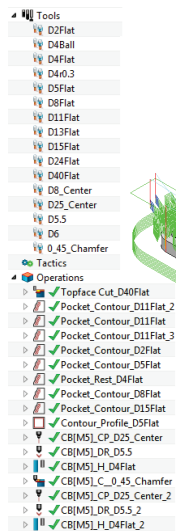
- ✓ Rough
- ✓ Rough → Rest
- ✓ Rough → Finish(side & bottom)
- ✓ Rough → Finish(side) → Finish(bottom)
- ✓ Rough → Finish(bottom) → Finish(side)
- ✓ Rough → Rest → Finish(side & bottom)
- ✓ Rough → Rest → Finish(side) → Finish(bottom)



## Various output documents

**Tool list** that informs used tools to export Excel file.

**NC Work Sheet** that shows used operations to export Excel file.



Tool List

Company	No.	Machine	Design
Name	Export	Size (T * W * L)	Date
		212 x 149 x 33	

HNO.	Tool	Type	Dia	R	Length	Remark
1	D2Flat	mill (Flat_EndMill)	2	0	15	
1	D4Ball	mill (Ball_EndMill)	4	2	20	
1	D6	drill	6.5		30	
1	0.45_Chamfer	chamfer				
2	D40.3	mill (Corn				
3	D4Flat	mill (Flat_				
3	D5.5	drill				
4	D5Flat	mill (Flat_				
4	D8Flat	mill (Flat_				
4	D8_Center	center				
5	D25_Center	center				
7	D11Flat	mill (Flat_				
8	D13Flat	mill (Flat_				
9	D15Flat	mill (Flat_				
12	D24Flat	mill (Flat_				
13	D40Flat	mill (Flat_				

NC Work Sheet

The 3D model shows a part with various toolpaths and dimensions. The dimensions are: X=106, Y=175, Z=33, Z0, and Z=74. The model is shown from different angles to illustrate the toolpaths.

File Name	Export	Design No.	X-axis position	-100	100
Designed	Date		Y-axis position	-14.9	14.9
Size	212 x 149 x 33	Total Time	Z-axis position	0	30
		20hour 20min 27sec			

No.	Operation	Tool	Set	Path Tot.	Thickness Z	Thickness	Step Type	Step Over	Time	Feed	Spindle
1	Topface Cut_D40Flat	Contour	0	1.00	20	60%	Step over	400	1000		
2	Home_Centour_D11Flat_2	D11Flat	7	0.01	20	50%	Step over	100	1000		
3	Home_Centour_D11Flat	D11Flat	7	0.01	20	50%	Step over	100	1000		
4	Home_Centour_D11Flat_3	D11Flat	7	0.01	10	50%	Step over	100	1000		
5	Home_Centour_D2Flat	D2Flat	1	0.01	20	50%	Step over	100	1000		
12	Home_Centour_D24Flat	D24Flat	4	0.01	10	50%	Step over	100	1000		
13	Home_Centour_D40Flat	D40Flat	3	0.01	10	50%	Step over	100	1000		
8	Home_Centour_D8Flat	D8Flat	4	0.01	11	50%	Step over	200	2000		
9	Home_Centour_D15Flat	D15Flat	9	0.01	6	50%	Step over	100	1000		
10	Contour_Profile_D5Flat	D5Flat	4	0.01	-1	50%	Step over	100	1000		
11	Contour_Profile_D25_Center	D25_Center	5	0	3		Step over	80	800		
12	Contour_Profile_D11Flat	D11Flat	3	0.01	-4.0000		Step over	80	800		
13	Contour_Profile_D40Flat	D40Flat	3	0.020	4.2	0.2000	Step over	100	1000		

*You need it.  
We create it.*

Developer  FOV

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