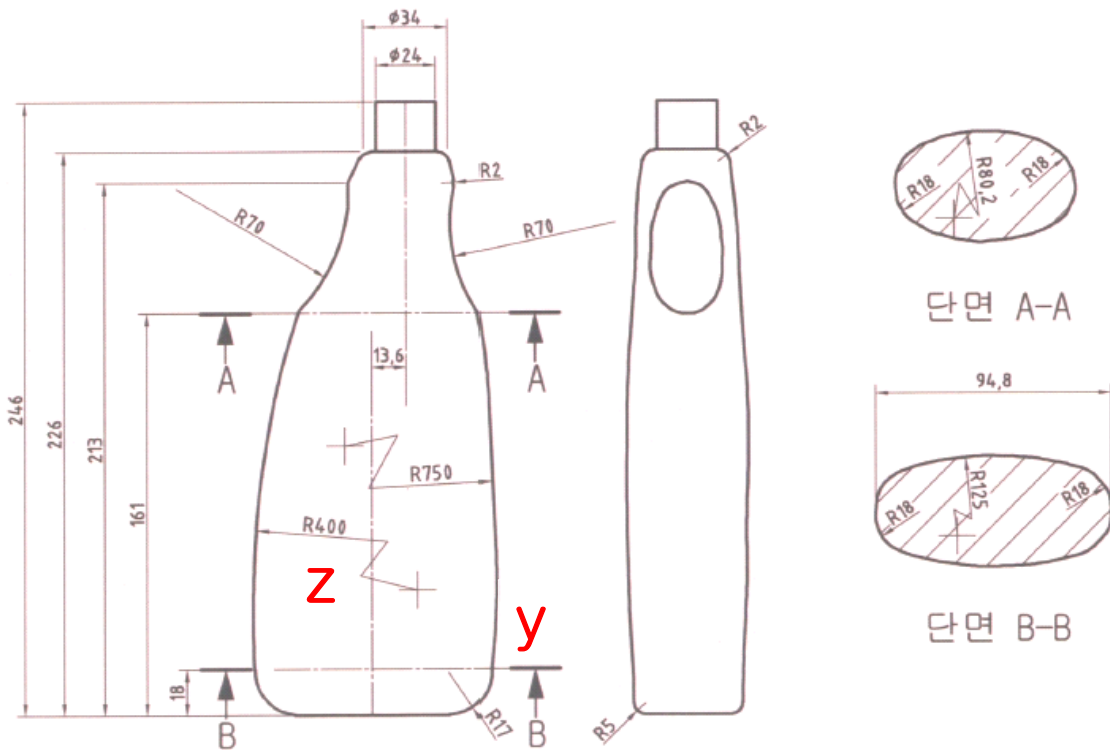
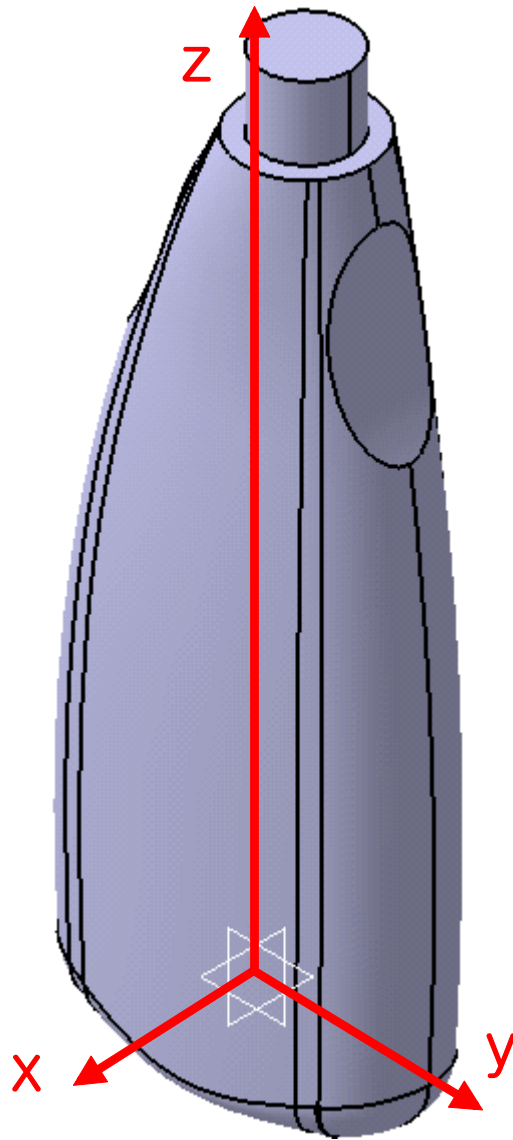



*C*omputer-graphic  
*A*ided  
*T*hree-dimensional  
*I*nteractive  
*A*pplication


*G*enerative *S*hape *D*esign


2019



## Generative Shape Design

Surfaces : Multi-sections Surface 


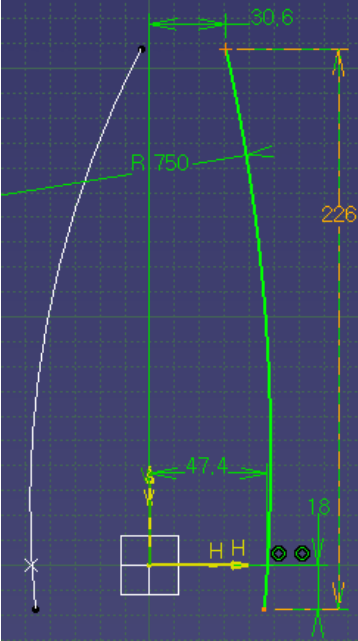
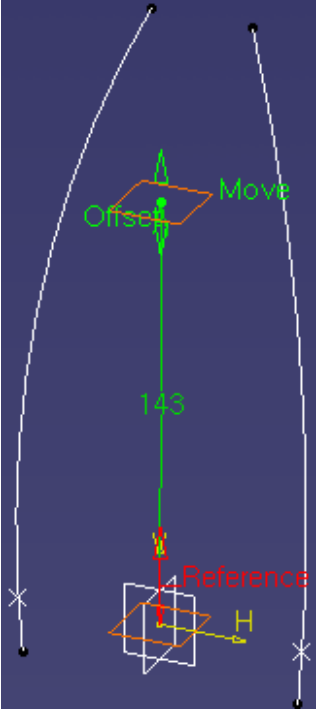





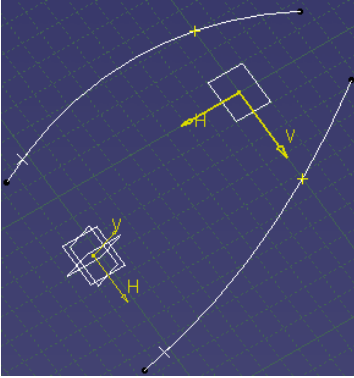
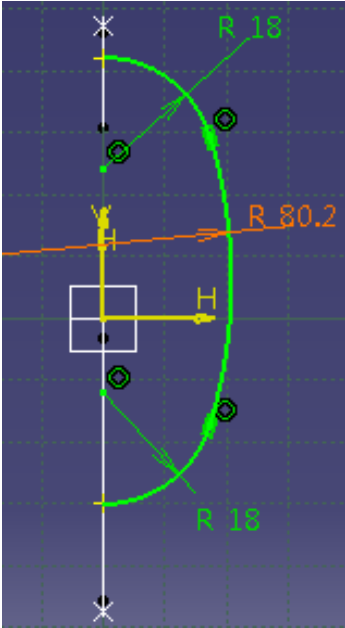
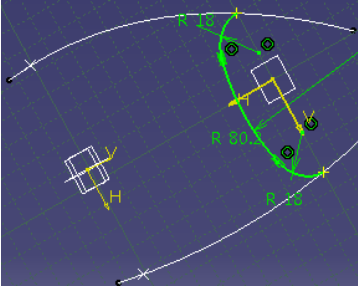



Operation : Symmetry 






Operation : Join 

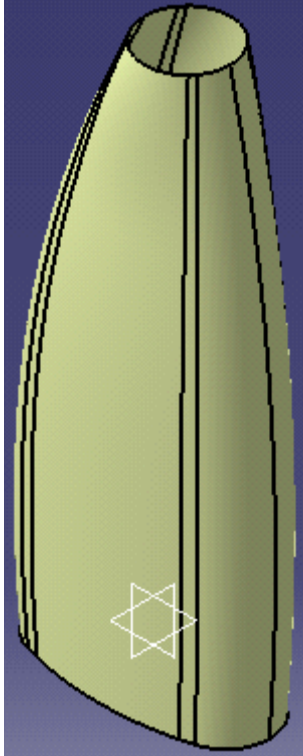
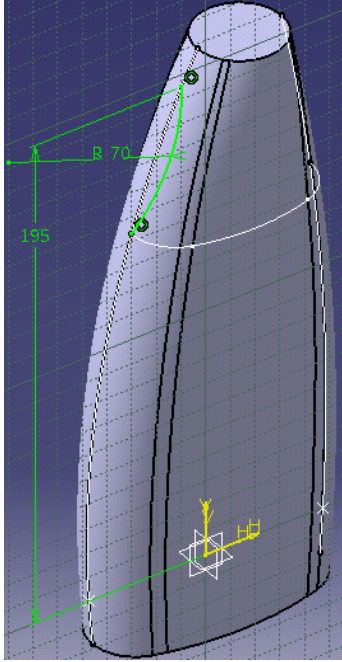
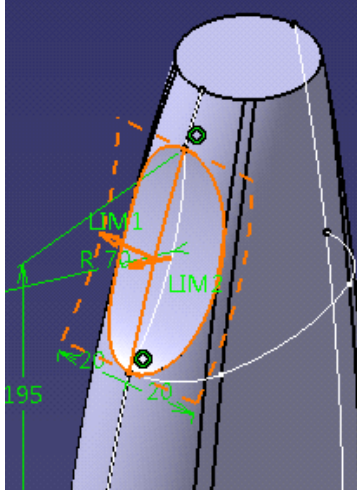




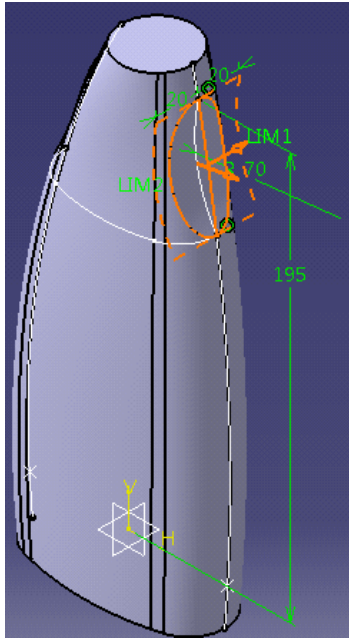
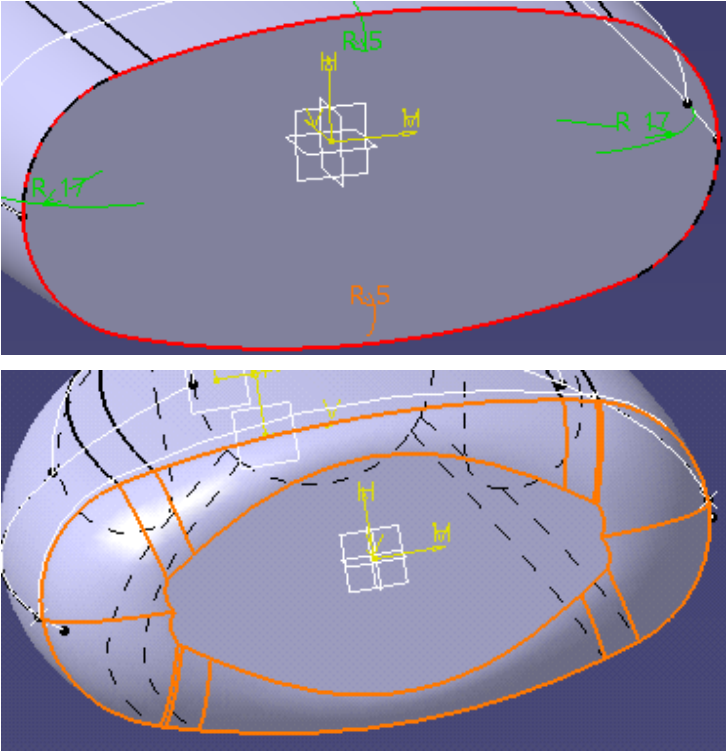



## Part Design

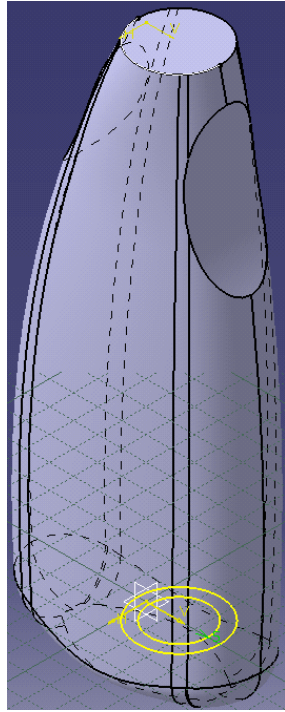
Surface-Based Features:Close Surface 


Dress-Up Features : Variable Radius Fillet 

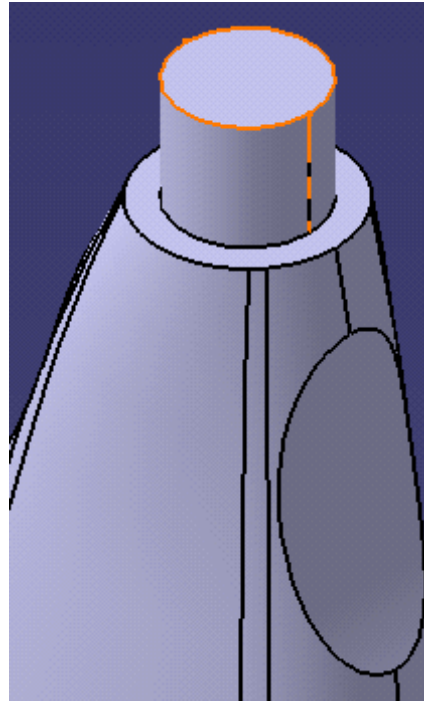
		
<p>Point by Clicking  &amp; Three Point Arc Starting with Limits </p>	<p>Point by Clicking  &amp; Three Point Arc Starting with Limits </p>	<p>Plane </p>
		
<p>Intersect 3D Elements </p>	<p>Three Point Arc Starting with Limits </p>	<p>Intersect 3D Elements </p>

<p>Three Point Arc Starting with Limits </p>	<p>Plane </p>	<p>Three Point Arc Starting with Limits </p>
<p>Multi-sections Surface </p>	<p>Symmetry </p>	

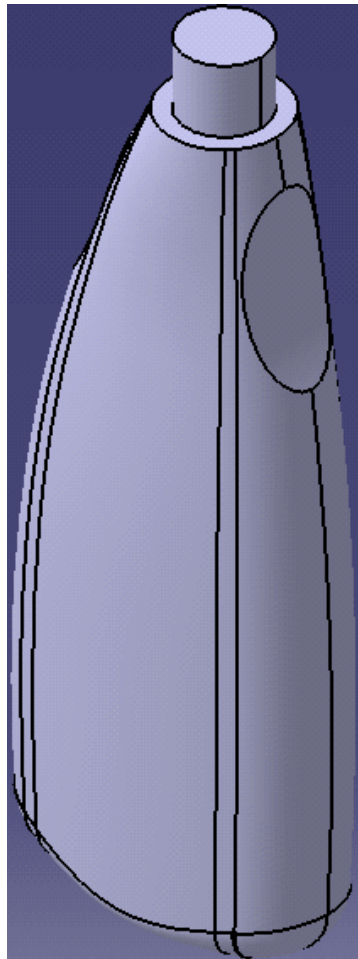
		
<p>Join </p>	<p>Close Surface  &amp; Three Point Arc Starting with Limits </p>	<p>Pocket </p>
		
<p>Three Point Arc Starting with Limits  &amp; Pocket </p>	<p>Variable Radius Fillet </p>	



Project 3D Elements   
Offset 



Pad 




Pull Down Menu : Start > Shape > Generative Shape Design


yz plane > Sketcher 

Profile : Point by Clicking  &

Three Point Arc Starting with Limits 

→ 두점(위,아래)을 찍고,  
이 두점을 지나는 R400인 Arc 그리기

Constraints Defined in Dialog Box 

& Constraint 


**Exit Workbench**


yz plane > Sketcher 

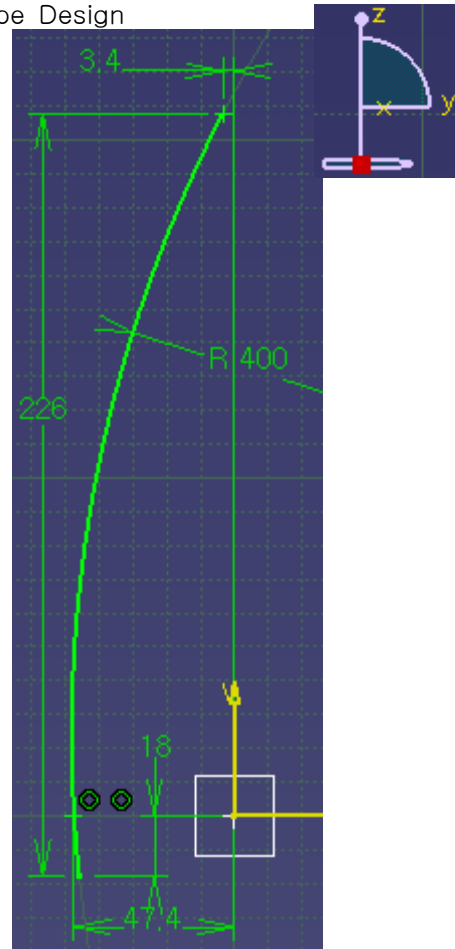
Profile : Point by Clicking  &

Three Point Arc Starting with Limits 

→ 두점을 찍고 이 두점을 지나는 R750인 Arc 그리기


Constraints Defined in Dialog Box 

& Constraint 



Exit Workbench 

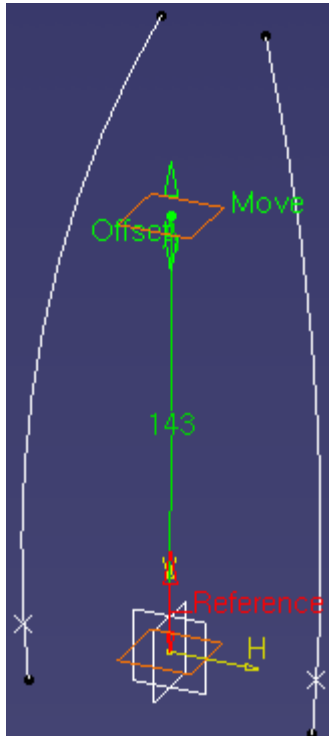
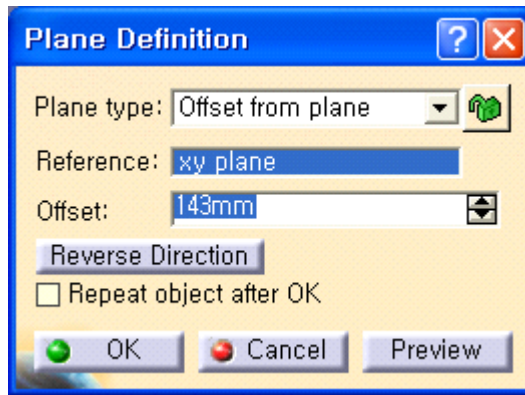



Wireframe : Plane 


Plane type : Offset from plane

Reference : xy plane

Offset : 143mm




Plane.1(생성된 Plane) plane > Sketcher 

View > Isometric View 

Operation>3D Geometry>Intersect 3D Elements 

R400 Arc 선택 → 교차하는 지점에 노란색 Point 생성

Operation>3D Geometry>Intersect 3D Elements 

R750 Arc 선택 → 교차하는 지점에 노란색 Point 생성

View > Normal View 

위에서 생성된 점을 지나는 Profile 만들기

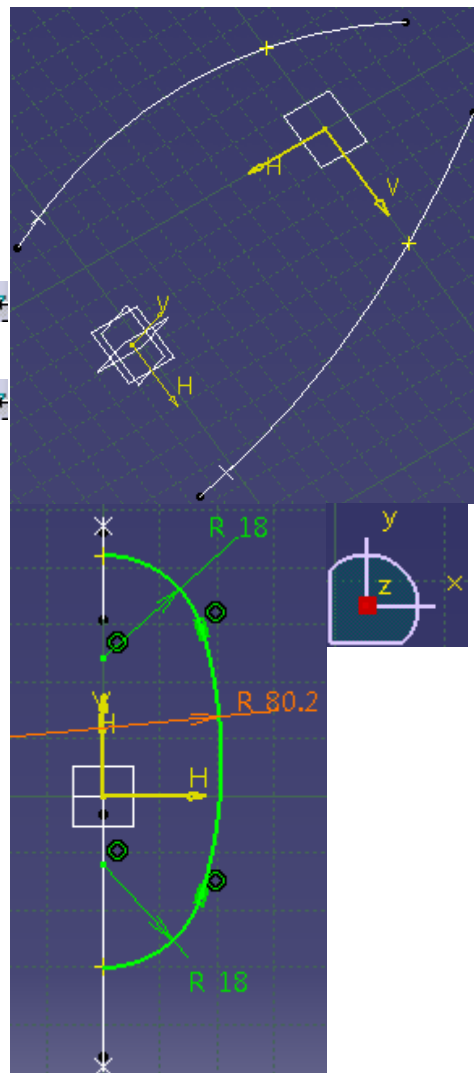
→ 단면 A-A의 Profile

Profile : Three Point Arc Starting with Limits 

Constraints Defined in Dialog Box 

& Constraint 

Exit Workbench 



xy plane > Sketcher 

View > Isometric View 

Operation>3D Geometry>Intersect 3D Elements 

R400 Arc 선택 → 교차하는 지점에 노란색 Point 생성

Operation>3D Geometry>Intersect 3D Elements 


R750 Arc 선택 → 교차하는 지점에 노란색 Point 생성


View > Normal View 

위에서 생성된 점을 지나는 Profile 만들기

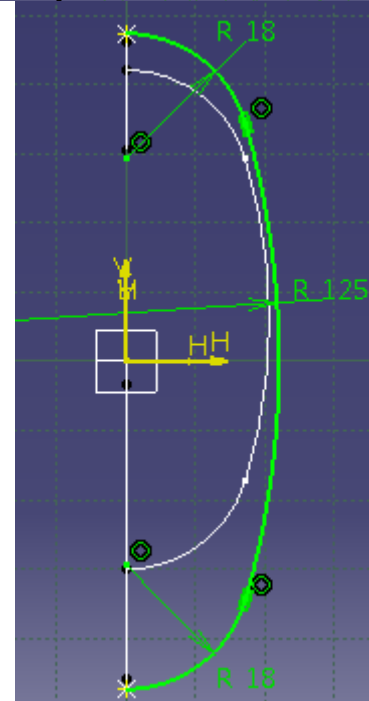
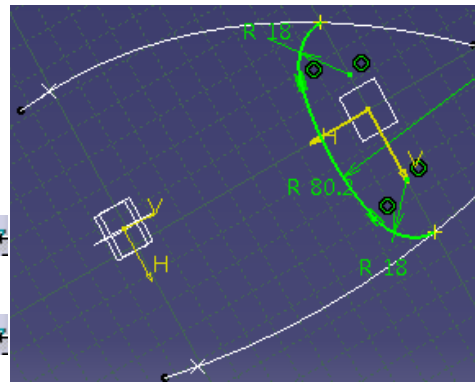
→ 단면 B-B의 Profile


Profile : Three Point Arc Starting with Limits 

Constraints Defined in Dialog Box 

& Constraint 

Exit Workbench 

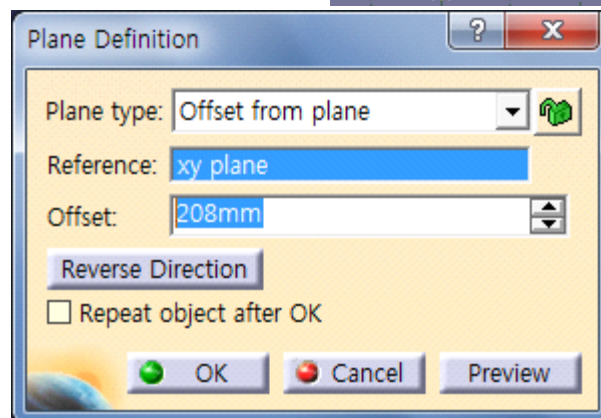



Wireframe : Plane 

Plane type : Offset from plane


Reference : xy plane


Offset : 208mm



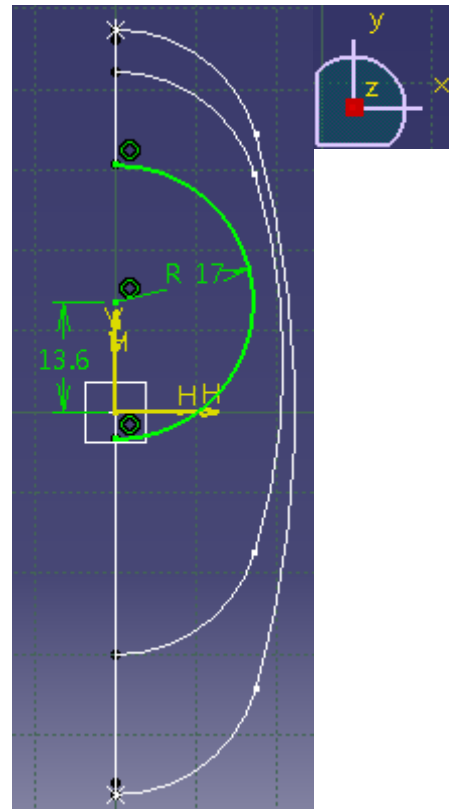
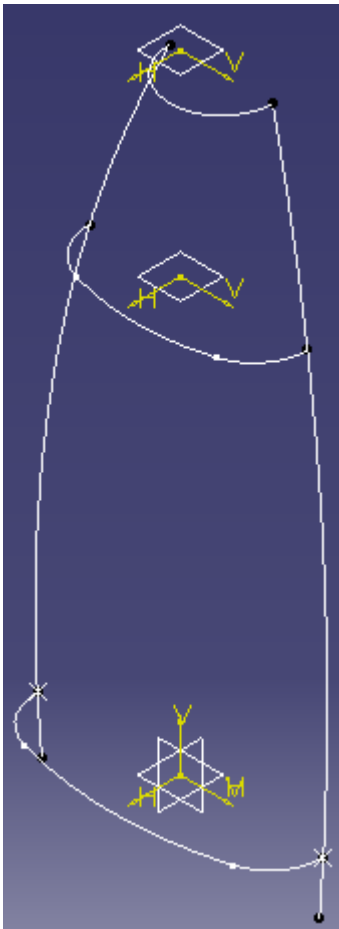
Plane.2(생성된 Plane) plane > Sketcher 


Profile : Three Point Arc Starting with Limits 

Constraints Defined in Dialog Box 

& Constraint 

Exit Workbench 



Surfaces : Multi-sections Surface 

Multi-sections Surface Definition

No	Section	Tangent	Closing Point
1	Sketch.5		
2	Sketch.3		
3	Sketch.4		

Guides | Spine | Coupling | Relimitation | Canonical

No	Guide	Tangent
1	Sketch.1#Edge.1	
2	Sketch.2#Edge.2	

Multi-sections Surface Definition

No	Section	Tangent	Closing Point
1	Sketch.5		
2	Sketch.3		
3	Sketch.4		

Guides | Spine | Coupling | Relimitation | Canonical

Relimited on start section  
 Relimited on end section

Replace Remove Add

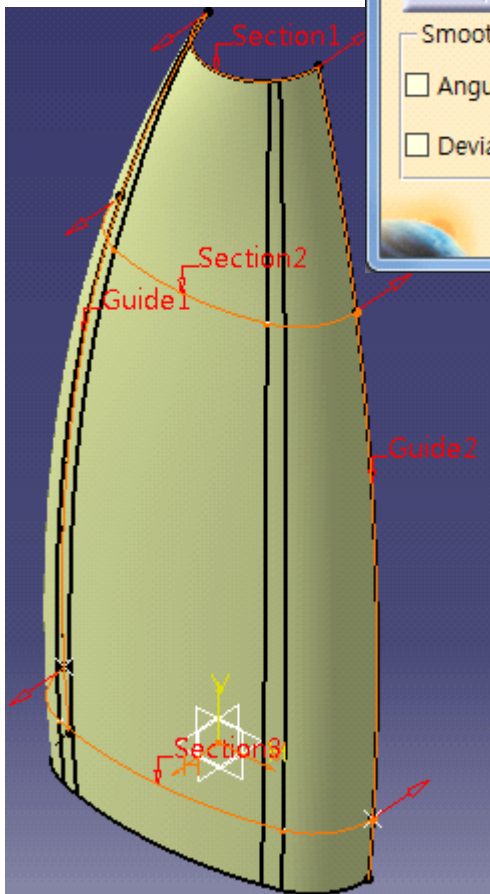
Smooth parameters


Angular correction: 0.5deg

Deviation: 0.001mm

OK Cancel Preview

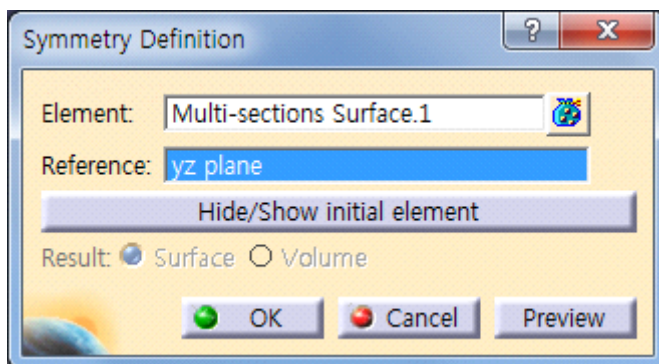
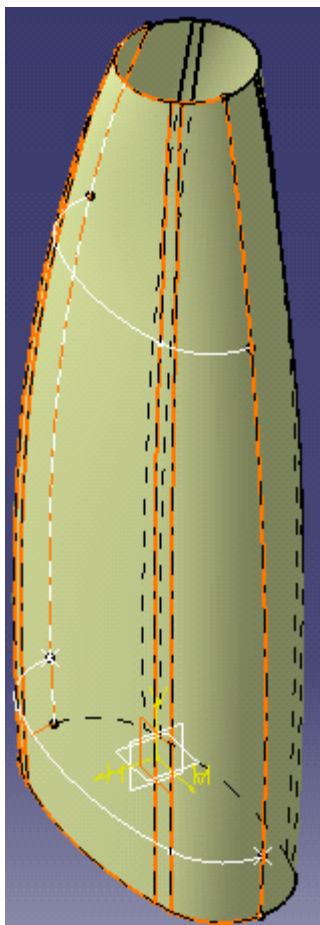
Relimitation




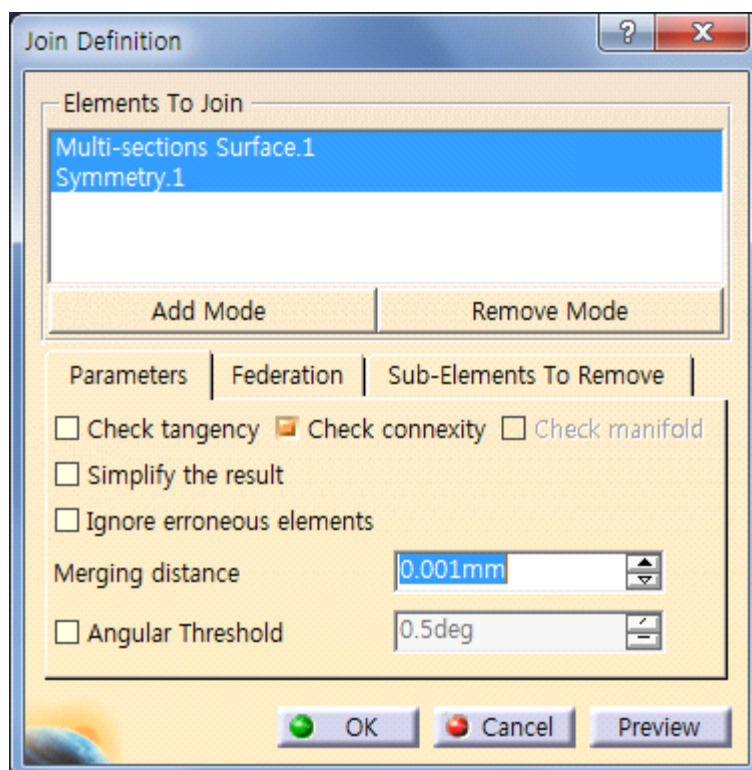
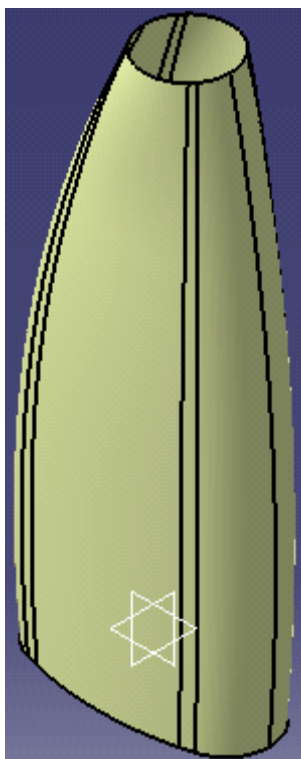
Operation : Symmetry 

Element : Multi-sections Surface.1

Reference : yz plane



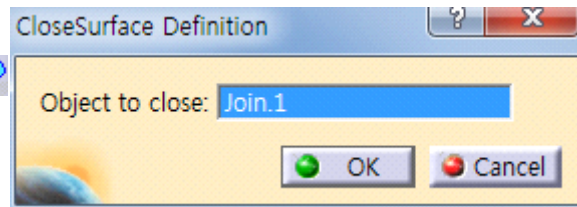
Operation : Join 




Pull Down Menu : Start > Mechanical Design > Part Design


Surface-Based Features:Close Surface 


Join.1 > Hide



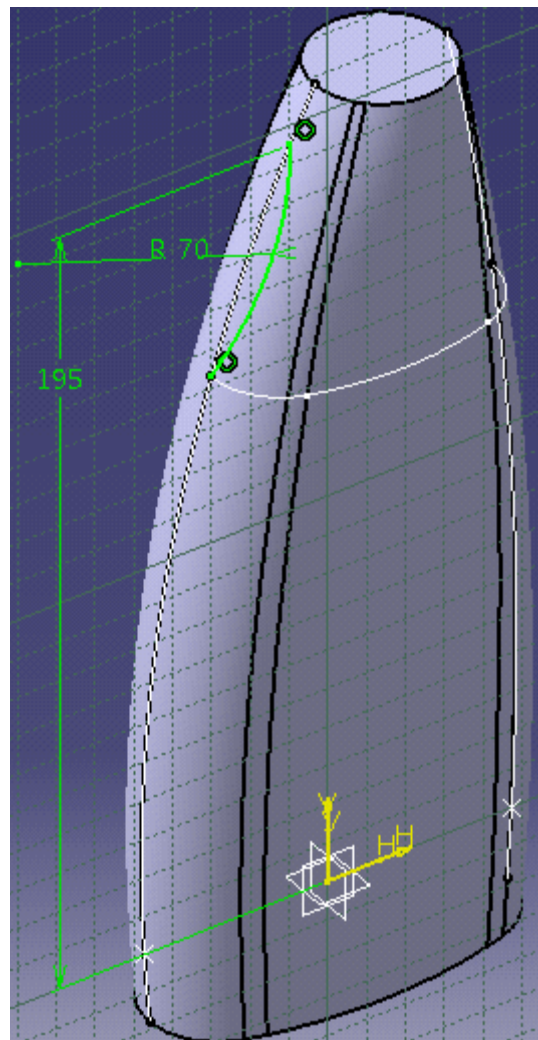
yz plane > Sketcher 

Profile:Three Point Arc Starting with Limits 

Constraints Defined in Dialog Box 

& Constraint 

Exit Workbench 

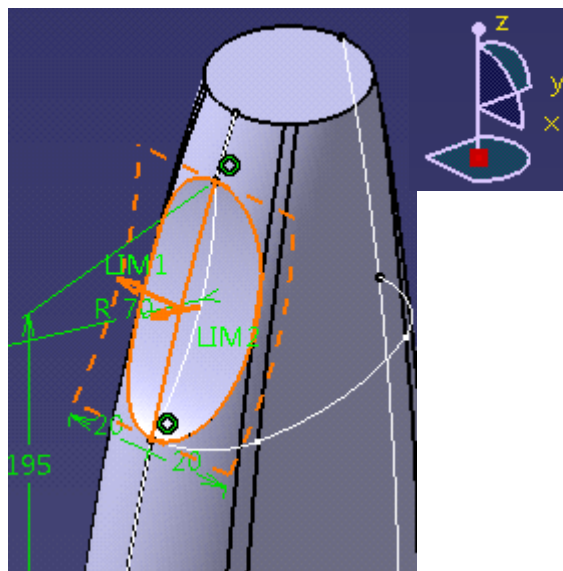
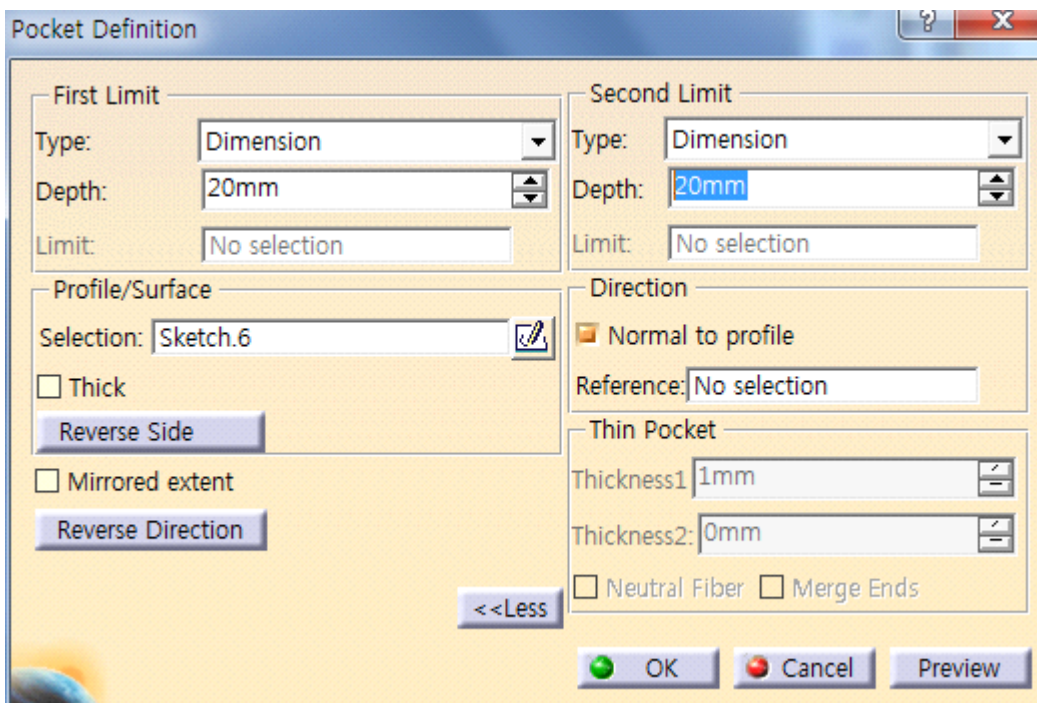


Sketch-Based Features : Pocket 

First & Second Limit

Type : Dimension


Depth : 20mm





반대쪽도 같은 방법으로...


yz plane > Sketcher 

Profile : Three Point Arc Starting with Limits 

Constraints Defined in Dialog Box 

& Constraint 

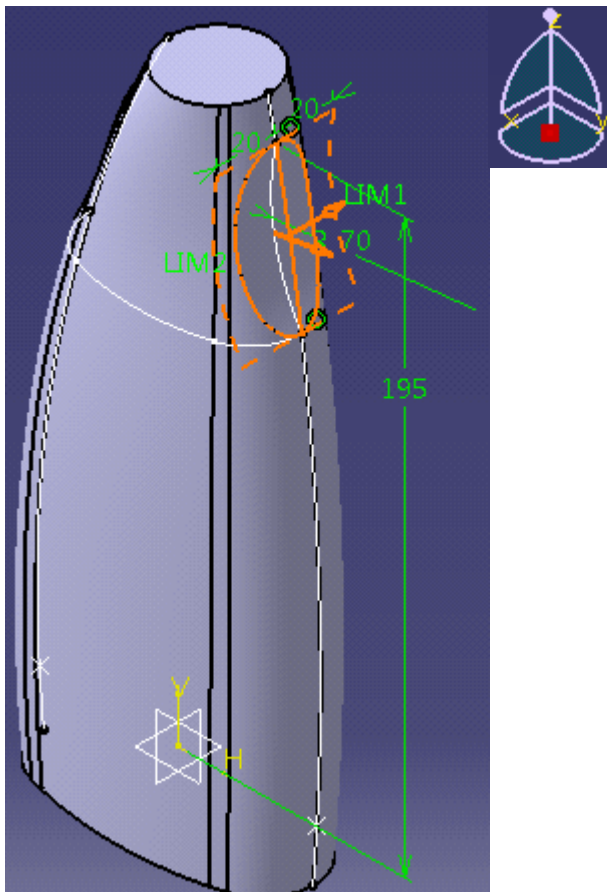
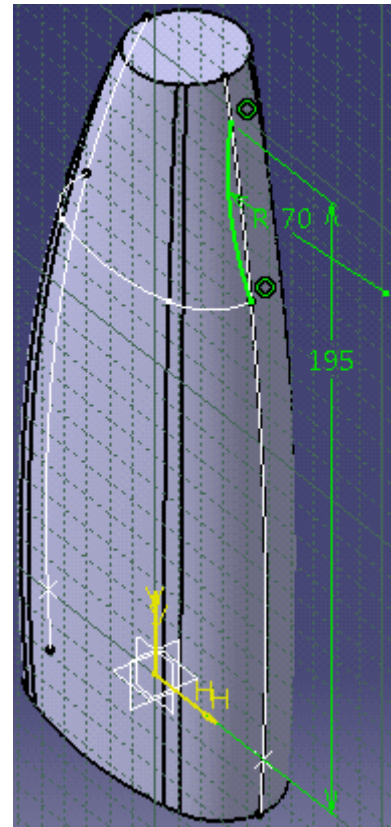
Exit Workbench 

Sketch-Based Features : Pocket 

First & Second Limit

Type : Dimension

Depth : 20mm



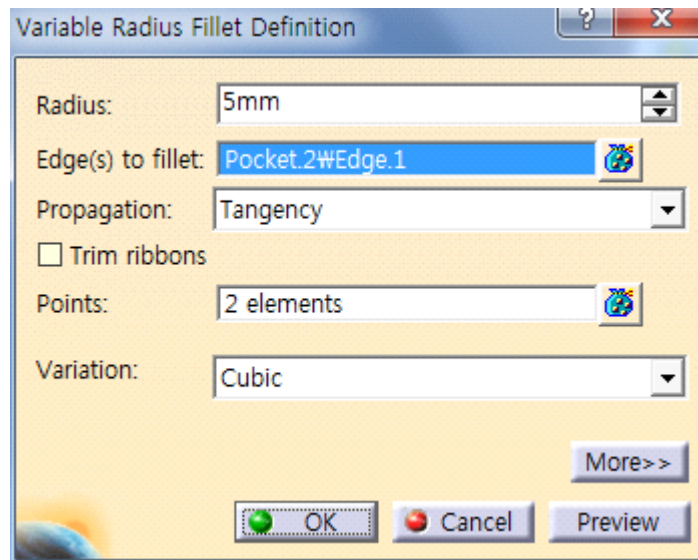


Dress-Up Features : Variable Radius Fillet 

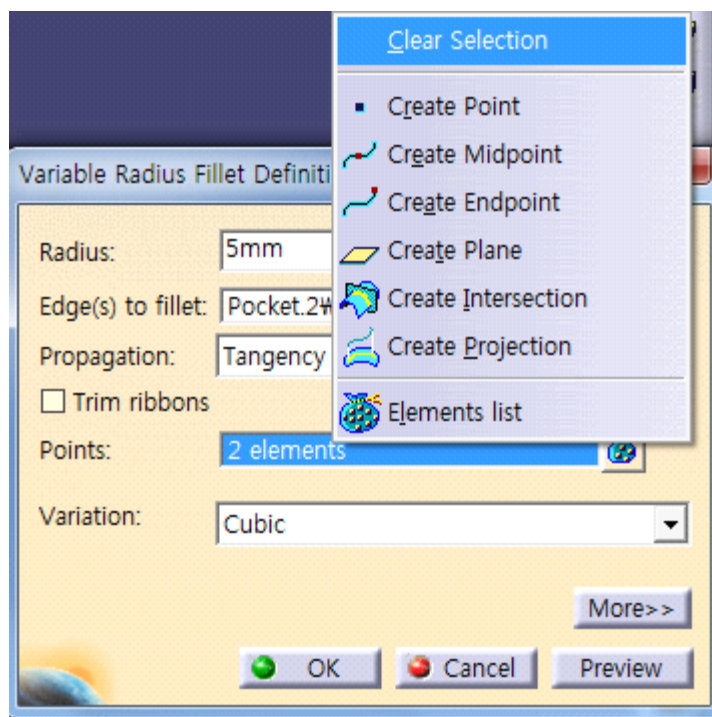
R5 & R17

Radius : 5mm

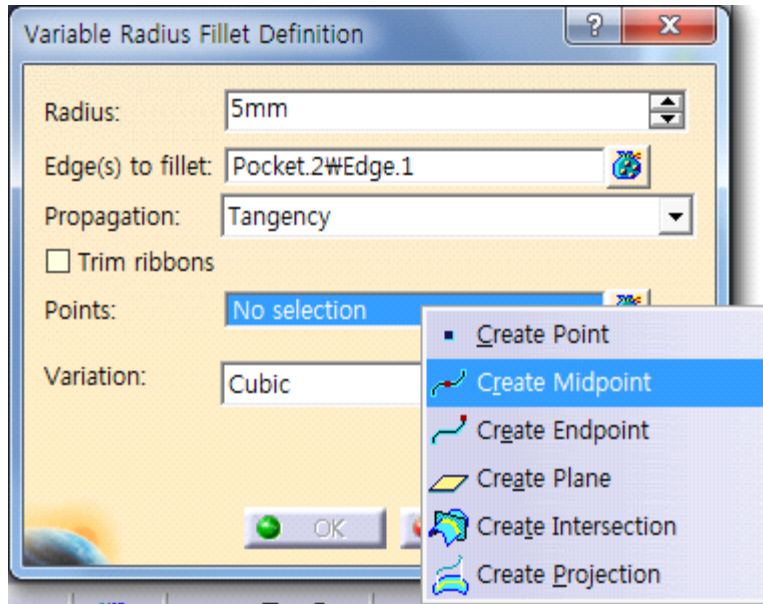
Edges to fillet : Pocket2/Edge.1



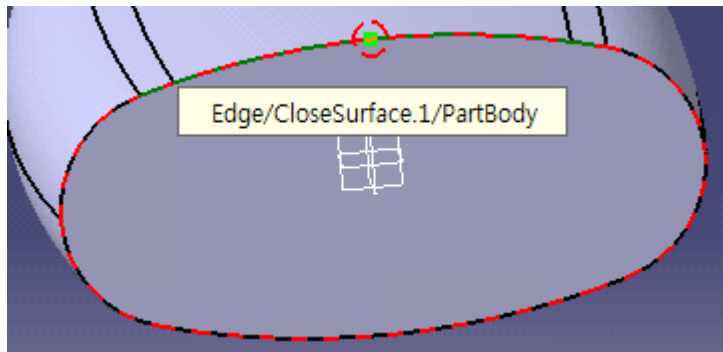
Points : Mouse 오른쪽버튼 > Clear Selection



Points : Mouse 오른쪽버튼 > Create Midpoint



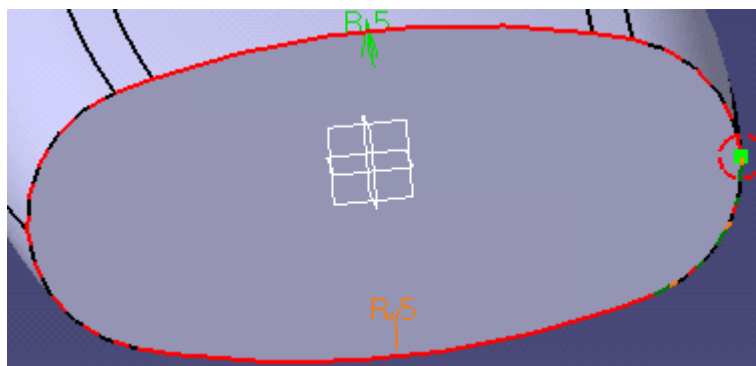
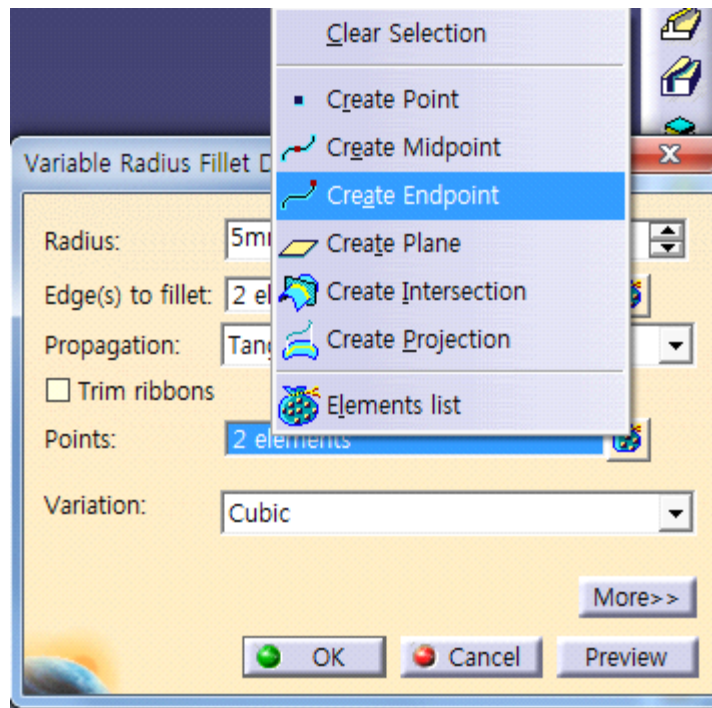
Points : Mouse 오른쪽버튼 > Clear Selection > 윗부분 클릭



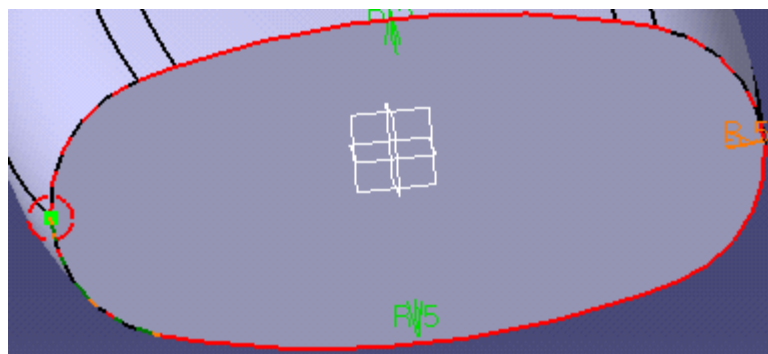
Points : Mouse 오른쪽버튼 > Create Midpoint > 아랫부분 클릭

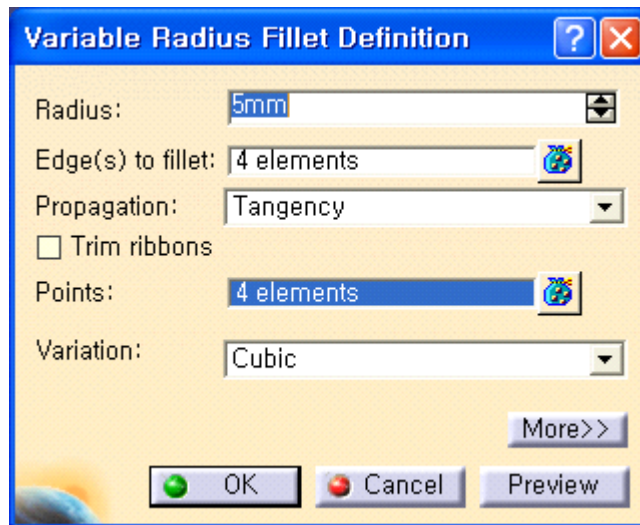


Points : Mouse 오른쪽버튼 > Create Endpoint > 우측 클릭

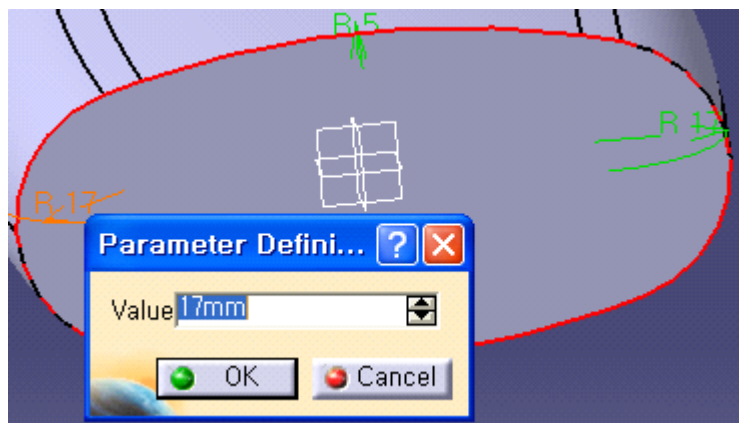



Points : Mouse 오른쪽버튼 > Create Endpoint > 좌측 클릭






좌우측 클릭하여 R17로 변경



xy plane > Sketcher 

Operation > 3D Geometry > Project 3D Elements 

→ CloseSurface.1 의 맨윗부분 선택  
노란색 원 생성

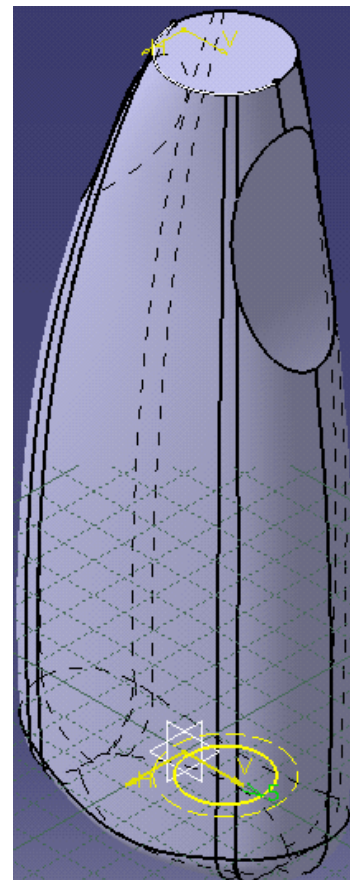
Operation > Transformation > Offset 


→ 위에서 만든 노란색 원 선택한후,  
안쪽으로 5mm Offset

Project로 만든 노란색 원(큰원)

→ Construction Element  로 변경

Exit Workbench 



Sketch-Based Features : Pad 

Type : Up to last

Offset : 20mm

Selection : Sketch.9

