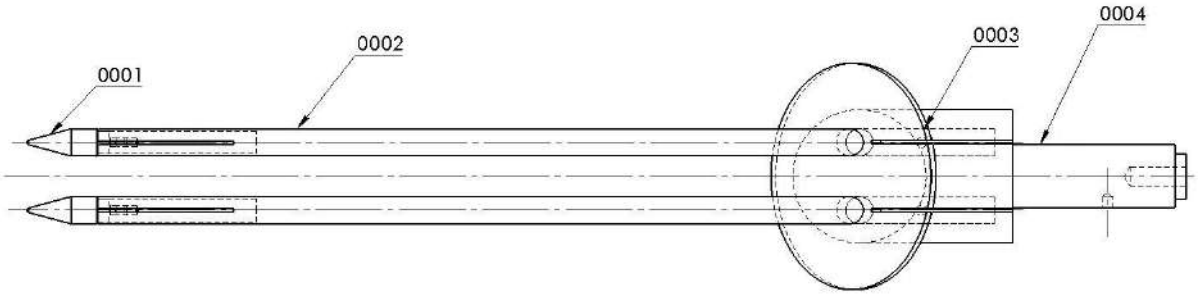
MECHANICAL ENGINEERING PORTFOLIO

Angga Surya Anggana, B.S.M.E.

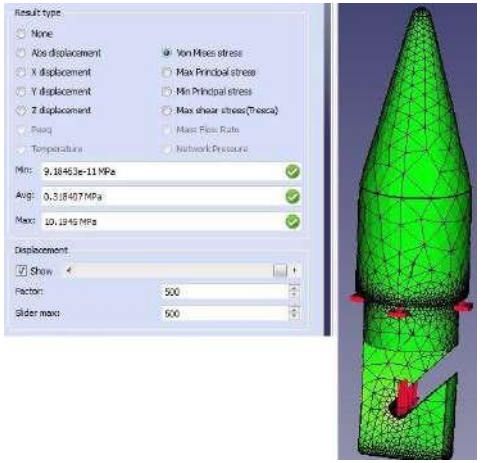
Auto Meganetoshi (New Development)

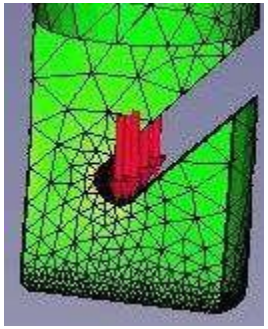
Automation can reduce labour costs and avoid human work accidents. Precise production equipment for automation is needed for the constant desired quality of the product made.



Projected Assembly Drawing

0004	Bar Holder
0003	Plate Guide Bar
0002	Indexed Bar
0001	Guide Pin
Part no.	





Minimum Factor of Safety (FoS) = 21.1

Stress Distribution on Guide Pin (SUS 304) when Handling Calculated with CalculiX

Perspective View Made with SolidWorks

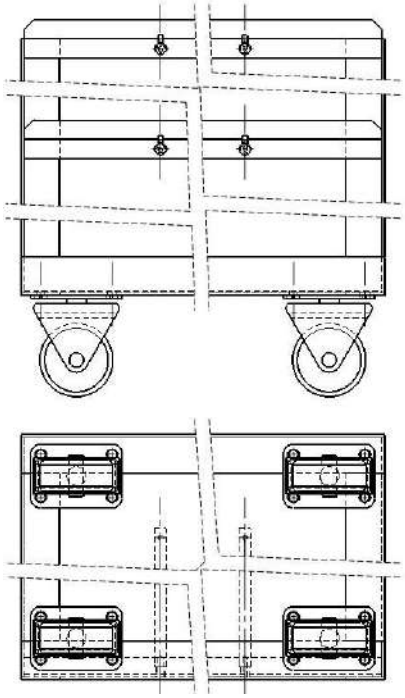
Services Include

Mechanical Concept Development, Detailed Design for Manufacturing, Material Selection, Analysis, Prototyping, Trial, and Vendor Liaison.

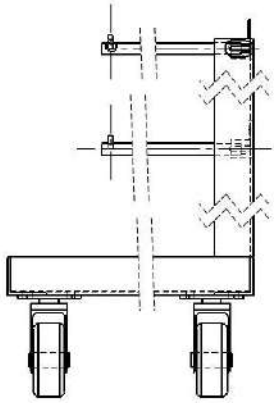
Rack Tube Silicon (New Development)

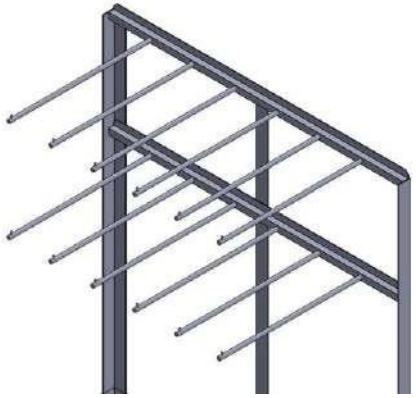
The proper place for placing process equipment can make longer usage ages of its equipment. Space availability on the production floor has become a common issue for layout.

Save spacing production floor mostly needed for an efficient layout.

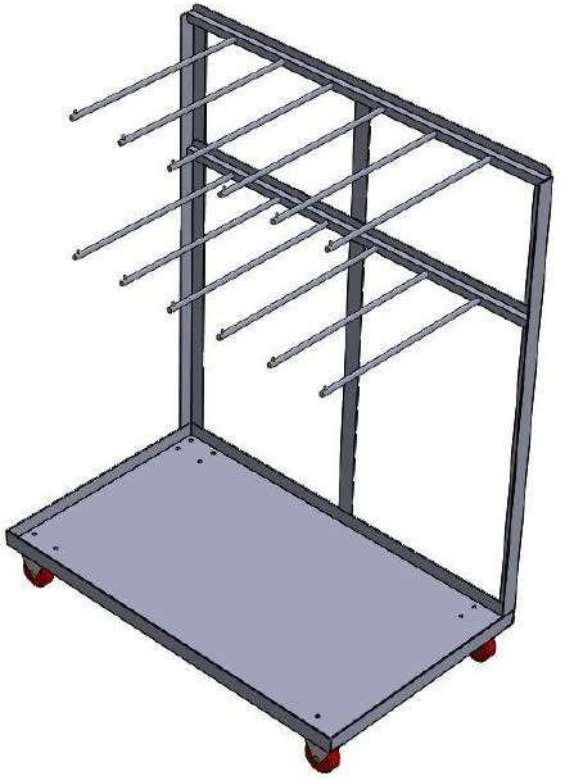


Standard Three Views Created





Two Rows Hanger Position Designed Instead of Single Row for Save Spacing Production Floor



Perspective View Made with SolidWorks

Services Include

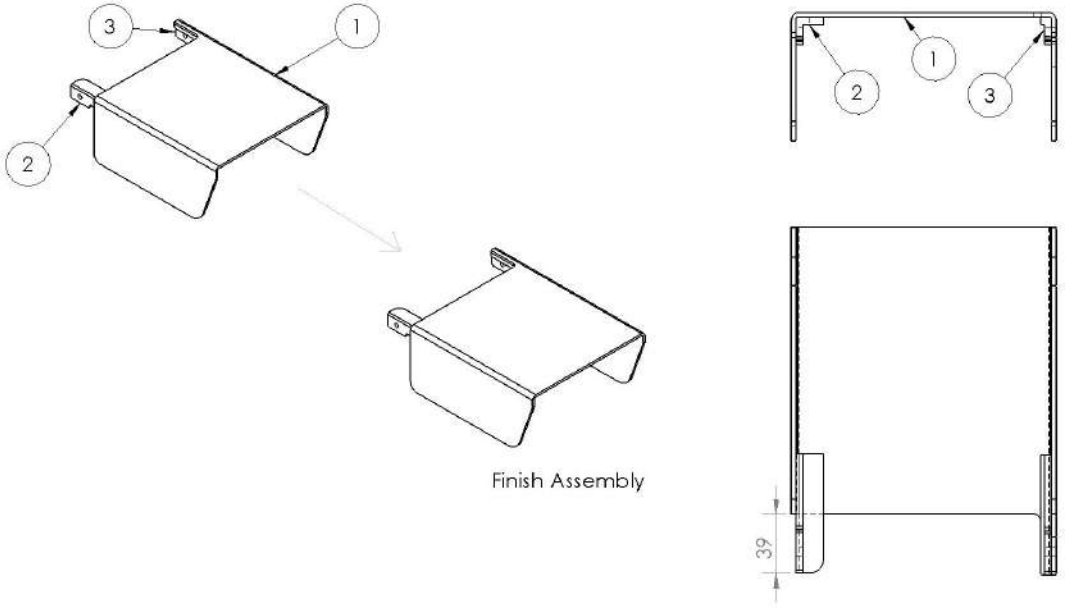
Mechanical Concept Development, Detailed Design for Manufacturing, Material Selection, Trial, and Vendor Liaison.

Cover NC Grip (Renewal/Localization)

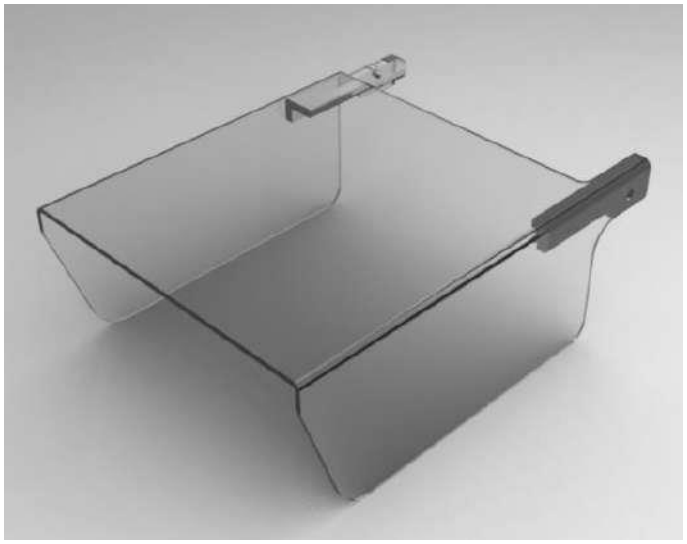
Cover NC Grip is part of the machine attachment enclosure. When this component brake out, it needs reparation if possible. Otherwise making of renewal component needed for replacement.

Measurement, modelling, and drawing from the existing physical object was taken due to the unavailable of drawing in Toyo Seal Indonesia. SolidWorks was used for modelling and drawing.

All parts components use fibreglass material.



Isometric View with Finish Assembly Shown with Three Parts Joined



Rendered Perspective View

Services Include

Reverse Engineering, Detailed Design for Manufacturing, and Vendor Liaison.

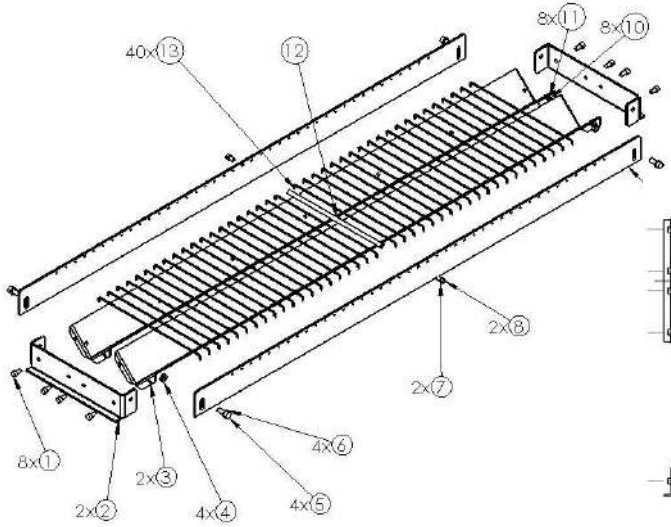
Rubber Seal Jig Dryer (Renewal/Localization)

Due to lack of quantity available of specific process equipment regarding of increase order from an external customer for Rubber Seal AMNR type, Toyo Seal Indonesia needs extra additional jig quantity. The jig is already available in small quantities but the drawing is not available yet.

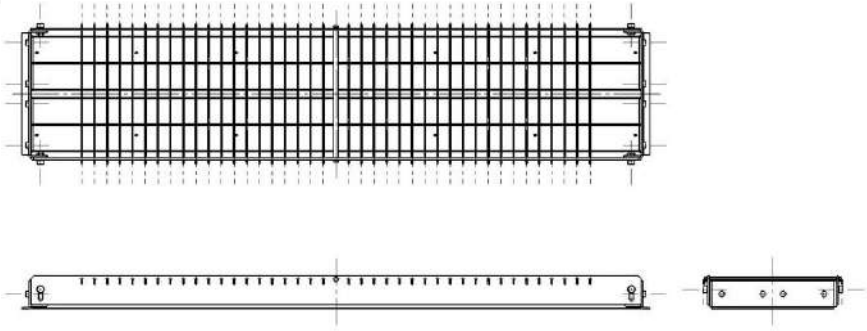
New drawing needed to produce this jig, so measurement was taken and modeling of physical object with its drawing done with SolidWorks.

Rendered Perspective View

No.	Part Name	Qty.
1	L-Bolt M5	8
2	Holder	2
3	V Plate	2
4	Hexagonal Nut M6	4
5	L-Bolt M6	4
6	Washer M6	4
7	Washer M4	2
8	L-Bolt M4	2
9	Side Frame	2
10	Hexagonal Nut M5	8
11	Spring Washer M5	8
12	Center Shaft	1
13	Round Bar	40



Exploded View with Bill of Material of Rubber Seal Jig Dryer Shown for Clarity of Its Component

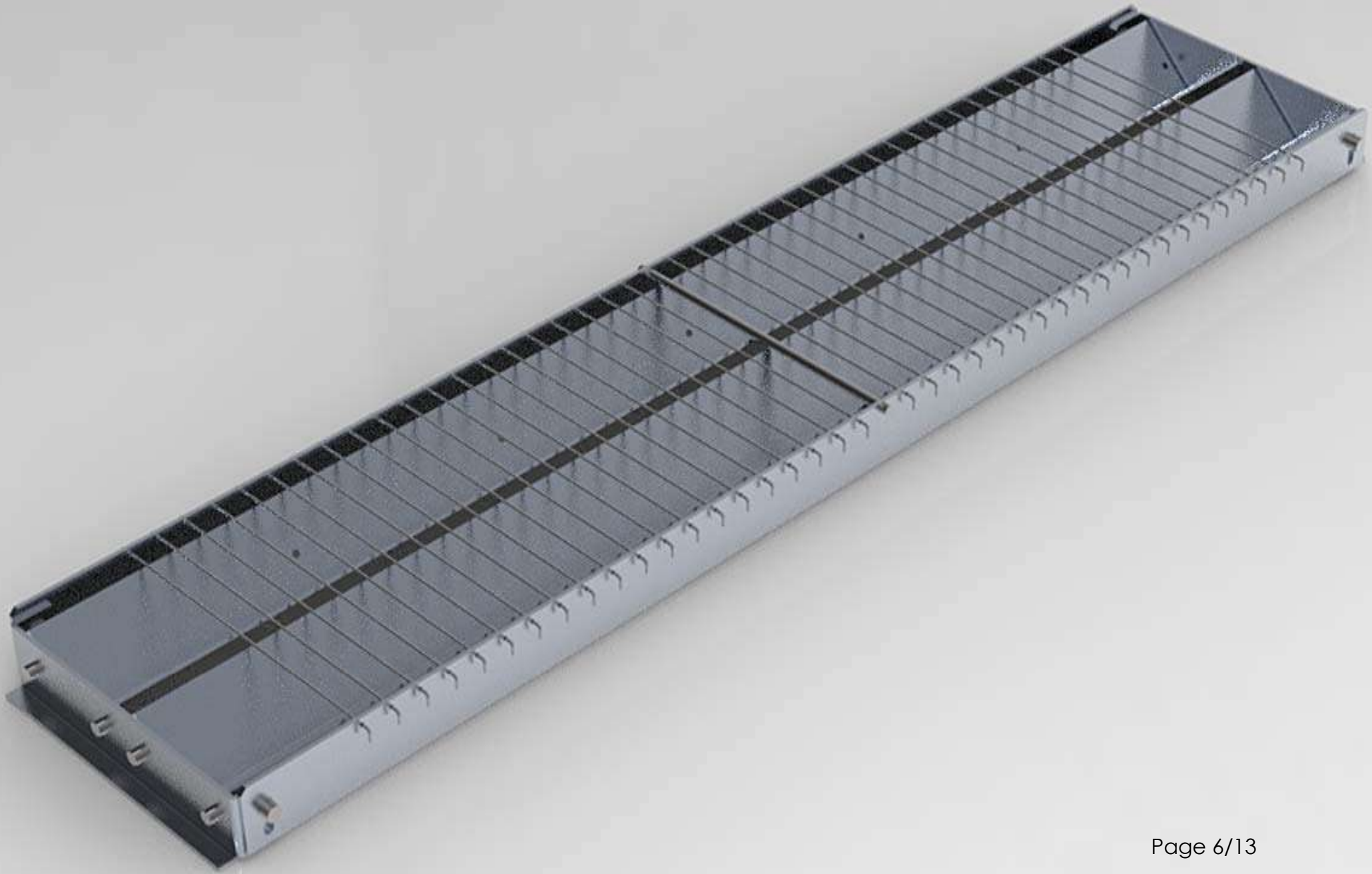


Standard 3 Views

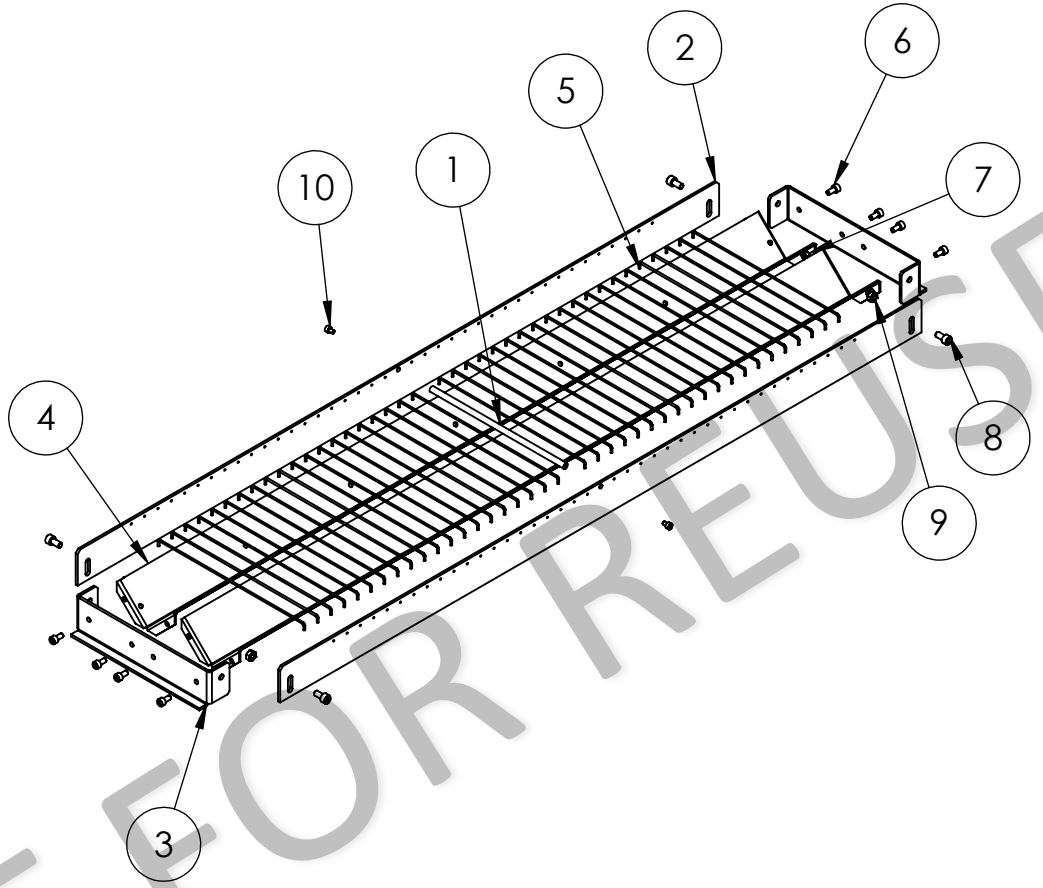
All sheet metal parts are made from aluminium alloy, fasteners from carbon steel, and other parts from stainless steel. No issues were encountered during process of using this renewal jig.

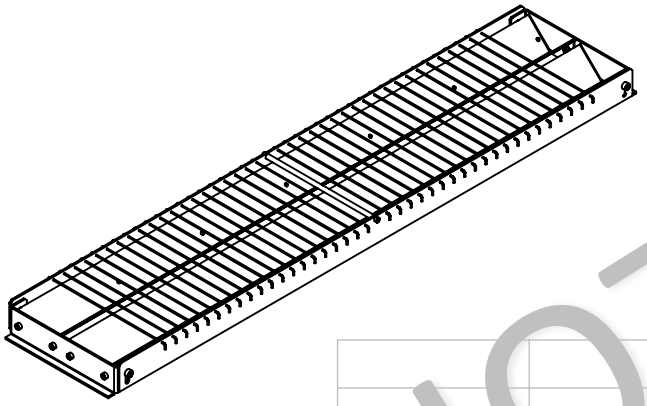
Services Include

Reverse Engineering, Detailed Design for Manufacturing, Material Selection, Trial, and Vendor Liaison.



ITEM NO.	PART NUMBER	QTY.
1	Center Shaft	1
2	Side Frame	2
3	Holder	2
4	V Plate	2
5	Round Bar	40
6	ISO 4762 M5 x 10 - 10N	8
7	ISO - 4032 - M5 - W - N	8
8	ISO 4762 M6 x 12 - 12N	4
9	ISO - 4032 - M6 - W - N	4
10	ISO 4762 M4 x 6 - 6N	2





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			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

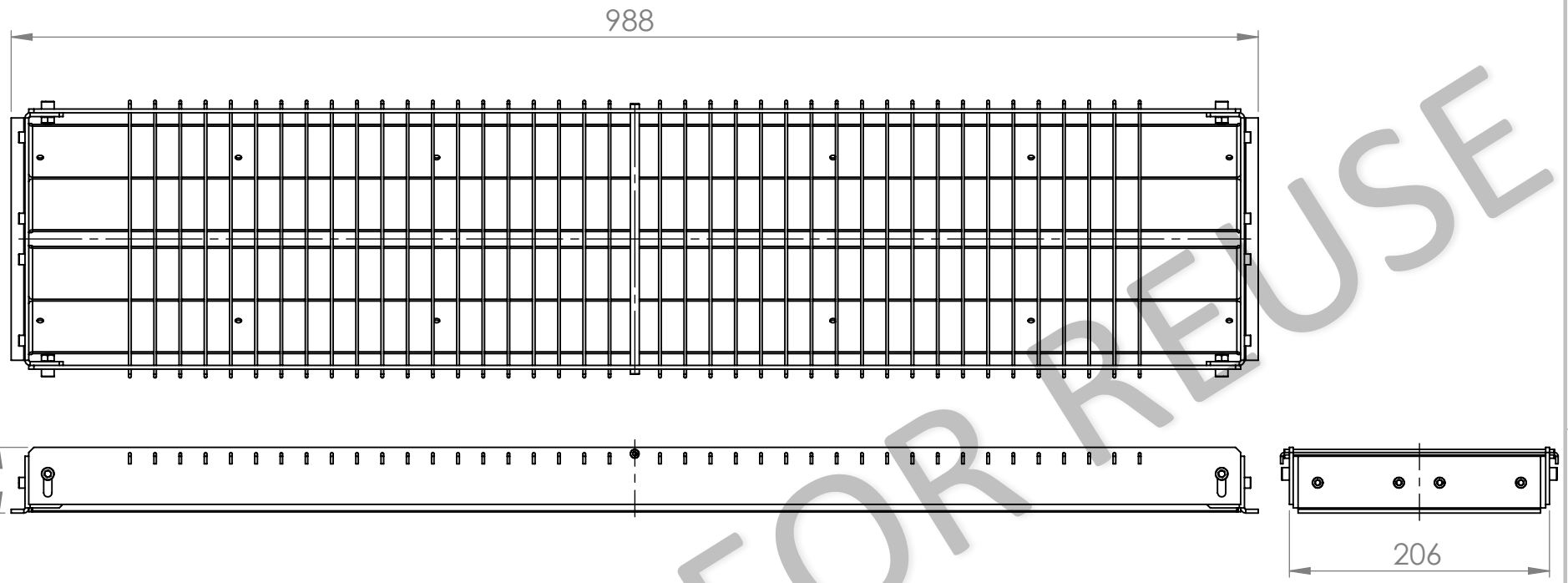
SEAL POST CURE DRAINER

TITLE:

GENERAL ASSEMBLY

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 1 OF 7



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		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

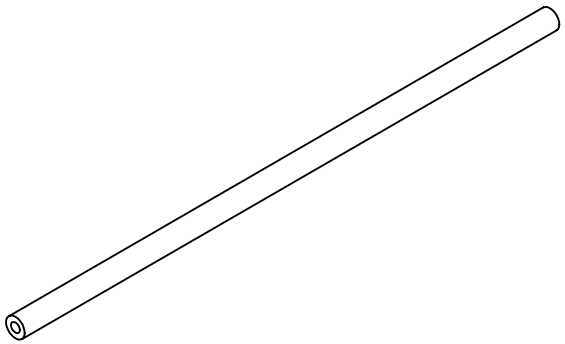
SEAL POST CURE DRAINER

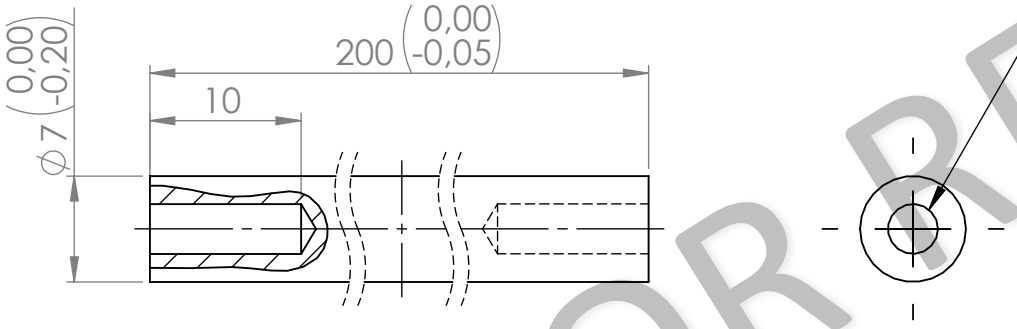
TITLE:

STANDARD 3 VIEWS

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 2 OF 7





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NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

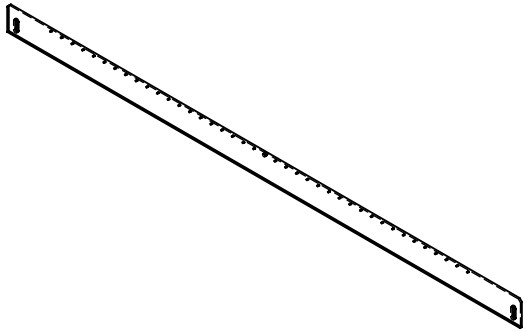
SEAL POST CURE DRAINER

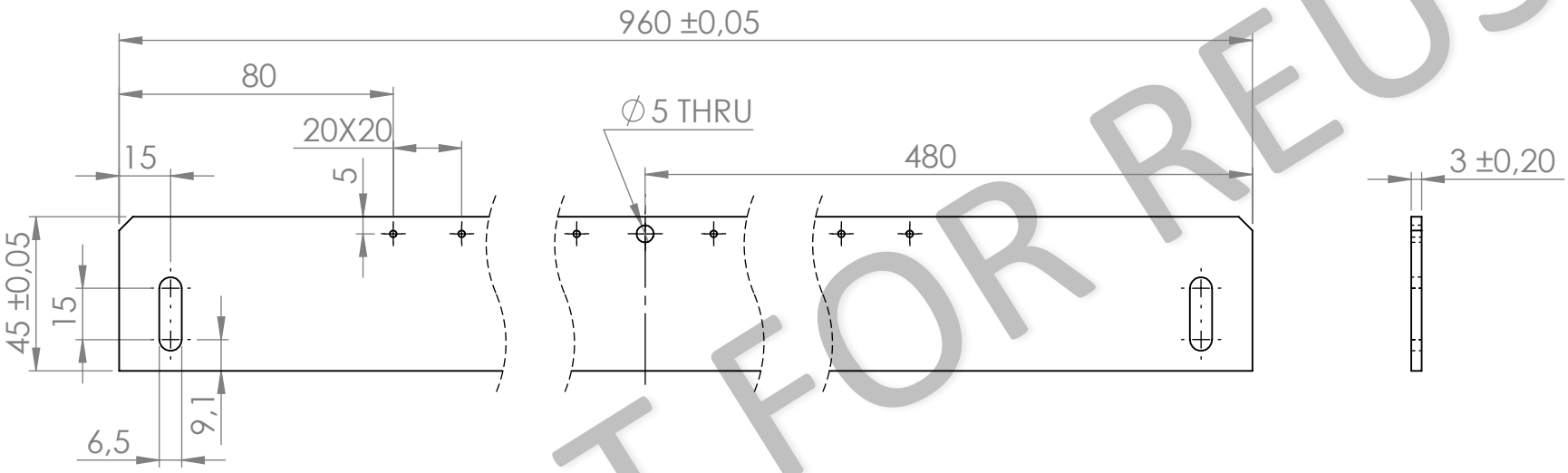
TITLE:

CENTER SHAFT

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 3 OF 7





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			ENG APPR.		
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		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL AL 6063	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

SEAL POST CURE DRAINER

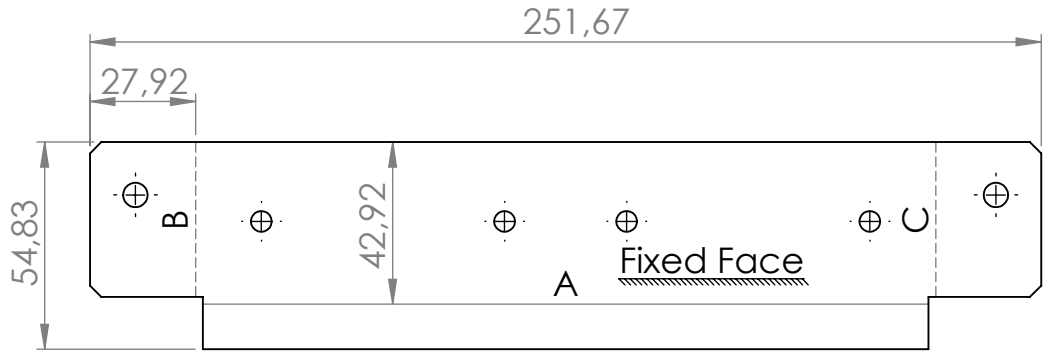
TITLE:

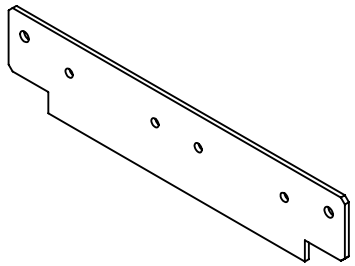
SIDE FRAME

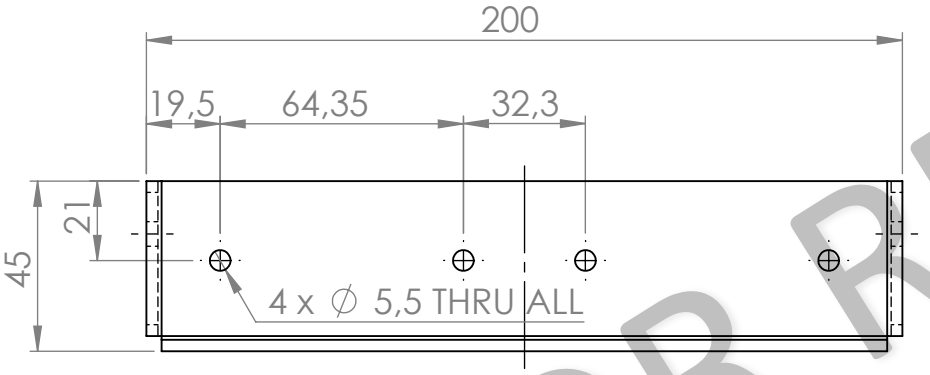
SIZE	DWG. NO.	REV
A		

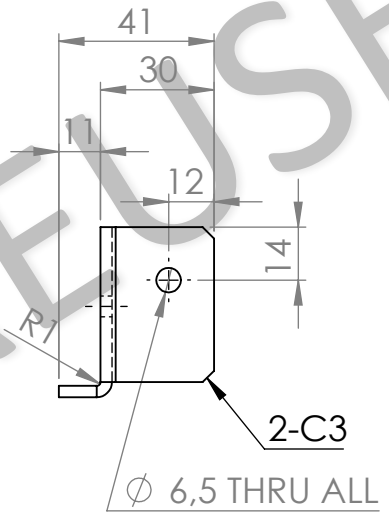
SCALE: FREE | SHEET 4 OF 7

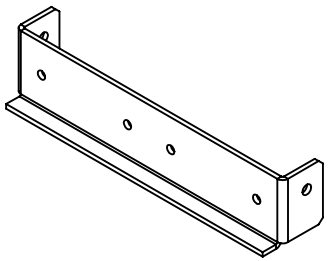
Tag	Direction	Angle	Inner Radius
A	UP	90°	1
B	DOWN	90°	1
C	DOWN	90°	1

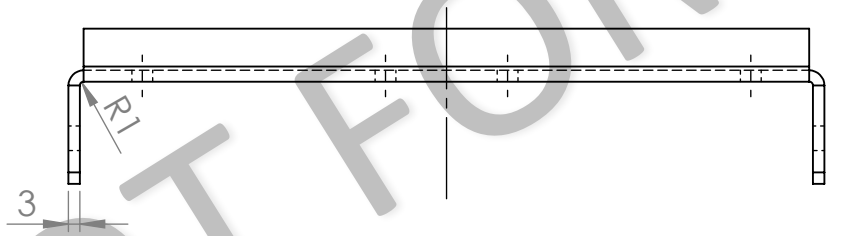












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		INTERPRET GEOMETRIC TOLERANCING PER:	
		MATERIAL AL 6063	
NEXT ASSY	USED ON	FINISH	
APPLICATION		DO NOT SCALE DRAWING	

	NAME	DATE
DRAWN	ANGGA	23/09/19
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

SEAL POST CURE DRAINER

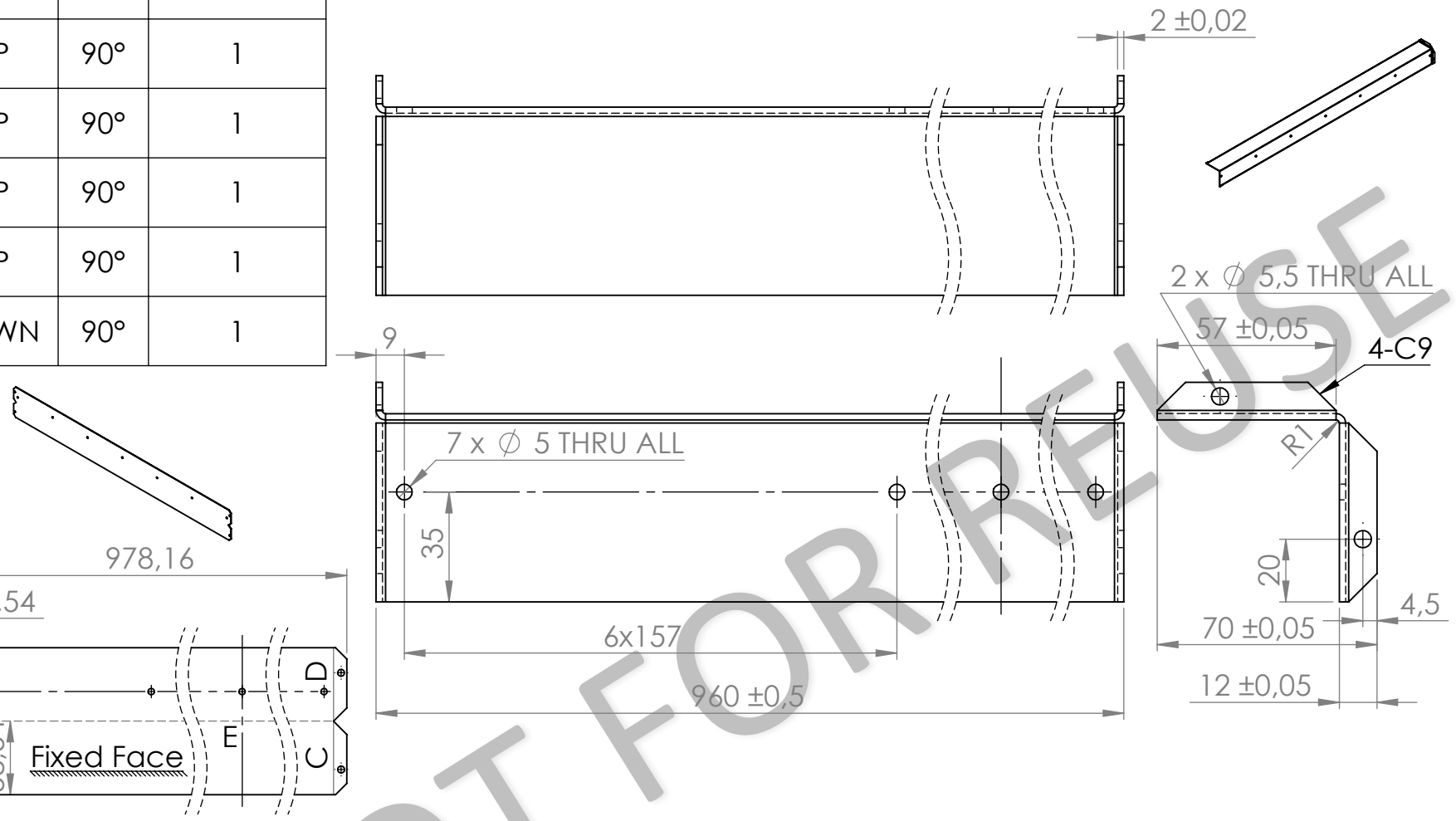
TITLE:

HOLDER

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 5 OF 7

Tag	Direction	Angle	Inner Radius
A	UP	90°	1
B	UP	90°	1
C	UP	90°	1
D	UP	90°	1
E	DOWN	90°	1



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		MATERIAL AL 6063	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

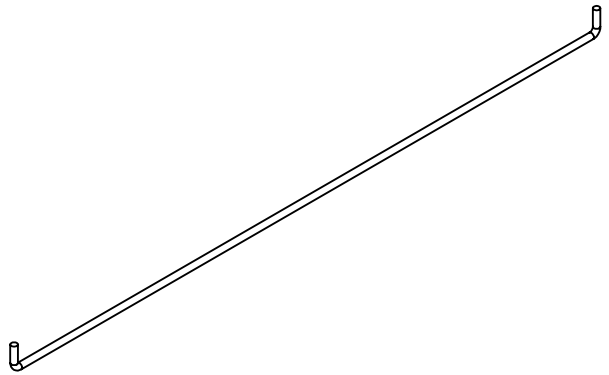
SEAL POST CURE DRAINER

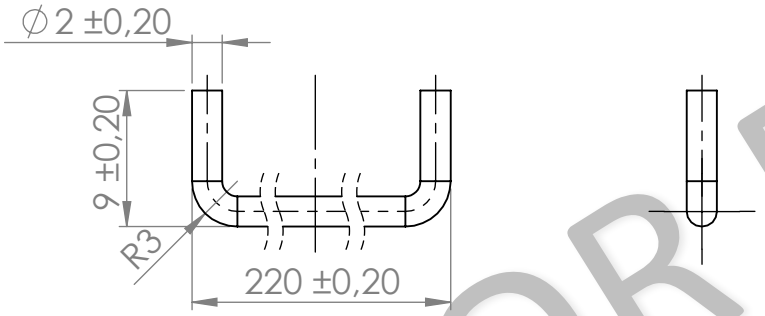
TITLE:

V PLATE

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 6 OF 7





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		MATERIAL SUS 304	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

SEAL POST CURE DRAINER

TITLE:

ROUND BAR

SIZE	DWG. NO.	REV
A		

SCALE: FREE | SHEET 7 OF 7