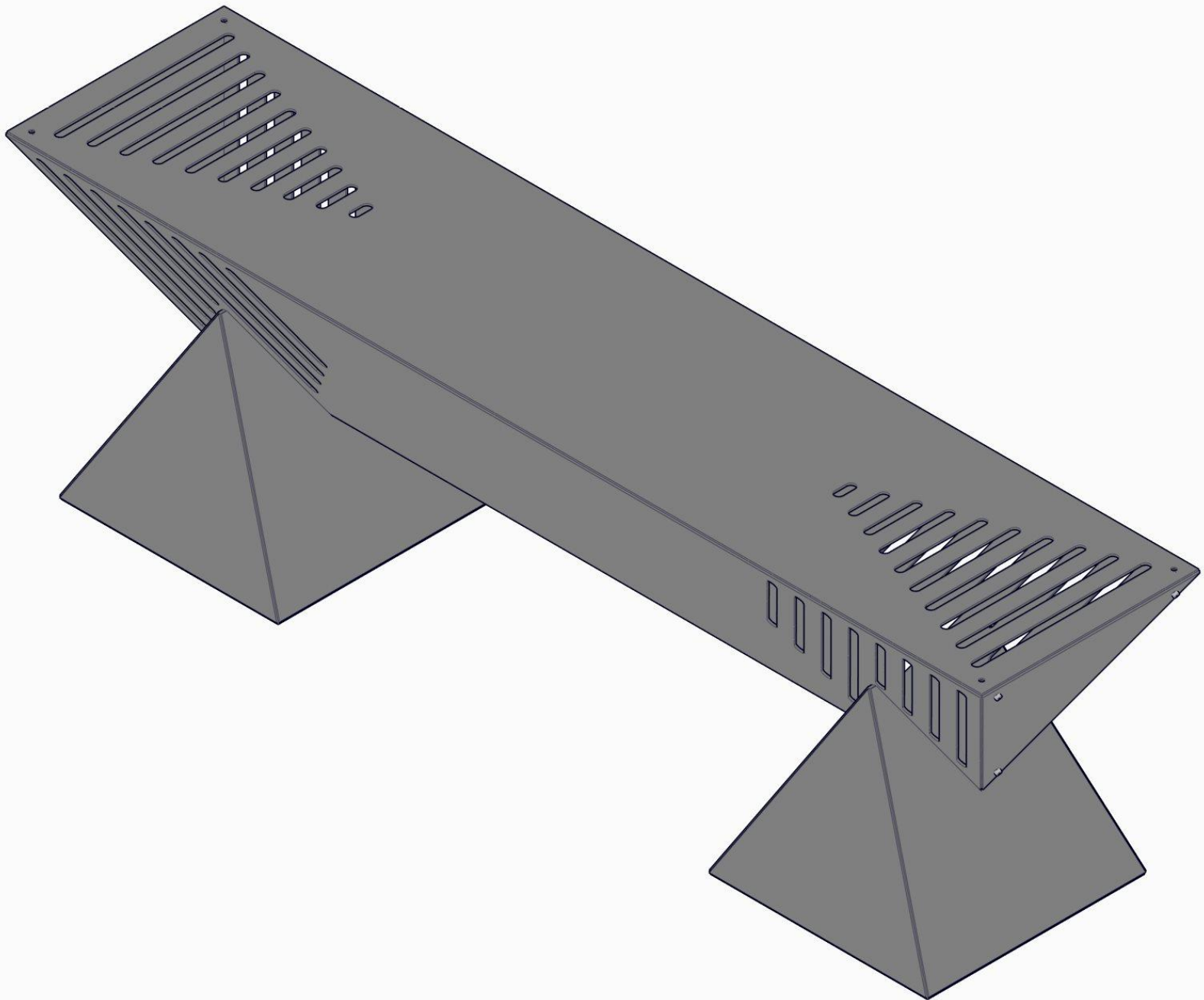


# JEOM0ETRI BENCH

## 81x18 - WAVES

(JEOM-000-032)



# Contents

WARNING..... 3

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# WARNING



## SAFETY WARNING: WELDING INVOLVED

Before you begin the assembly process, it's crucial to understand the risks and necessary precautions associated with welding. Please read and adhere to the following safety guidelines:

- **Professional Supervision:** If you're inexperienced in welding, consider seeking guidance or supervision from a trained professional. A small error can have significant consequences on the durability and safety of your furniture.
- **Protective Gear:** Welding can produce intense UV light, sparks, and spatter. Always use a welding helmet with the correct shade of lens, wear flame-resistant clothing, leather gloves, and safety boots. Safety glasses should be worn underneath the helmet for added eye protection.
- **Work in a Safe Environment:** Welding can produce harmful fumes and gases. Always work in a well-ventilated space, preferably outdoors. Remove any flammable materials from the vicinity, and always have a fire extinguisher on hand.
- **Pre-welding Inspection:** Thoroughly inspect the metal parts for any signs of damage, rust, or contamination. Clean the areas to be welded to ensure there are no oils, paints, or other materials that might interfere with the weld.
- **Equipment Check:** Before you start, ensure your welding machine is in proper working condition. Check cables, connectors, and welding gun for any damage or wear.
- **Avoid Water:** Never weld in wet conditions or touch the welding equipment with wet hands or gloves. Water is a conductor of electricity and can increase the risk of shocks.
- **Grounding:** Ensure that the piece you're welding is correctly grounded. A proper ground connection is essential for safety and for producing quality welds.
- **Post-welding Protocol:** Once you finish welding, let the welded parts cool down gradually. Rapid cooling can lead to metal warpage or structural weaknesses.
- **Stay Informed:** Familiarize yourself with the Material Safety Data Sheet (MSDS) for the metals you're working with and the filler materials you're using.
- **First Aid:** Keep a first aid kit nearby. In case of minor burns, immediately hold the affected area under cold running water for at least 10 minutes.
- **Limit Distractions:** Ensure that your workspace is free from unnecessary distractions. Focus is critical when welding to maintain consistent quality and safety.
- **Store Equipment Safely:** After completion, store your welding equipment in a dry, safe place away from children's reach.

Remember, your safety and the quality of your work go hand in hand. Always prioritize safety precautions and never rush the welding process. If you're ever uncertain about a step or safety measure, seek guidance before proceeding.

**Your safety is our top priority! No task justifies risking injury.**

# BILL OF MATERIALS

See page 25 for detailed drawings of each part.

ITEM	PART NUMBER	DESCRIPTION	REV	MATERIAL	QTY.
1	1001-010-000	Projection Weld Nut - .25-20	A-1	STEEL	7
2	91251A537	Black-Oxide Alloy Steel Socket Head Screw	A-1	STEEL	3
3	JEOM-050-032	JEOMETRI SEAT WELDMENT TOP - 81x18 - WAVES	A-1	SM_A36_0.1345T	1
4	JEOM-051-032	JEOMETRI SEAT WELDMENT SIDE - 81x18 - WAVES	A-1	SM_A36_0.1345T	2
5	JEOM-052-002	JEOMETRI SEAT WELDMENT END - 18	A-1	SM_A36_0.1345T	1
6	JEOM-052-005	JEOMETRI SEAT WELDMENT END BOLTABLE - 18	A-1	SM_A36_0.1345T	1
7	JEOM-053-002	JEOMETRI BASE WELDMENT SIDE - 18	A-1	SM_A36_0.1345T	4
8	JEOM-054-002	JEOMETRI BASE WELDMENT FRONT - 18	A-1	SM_A36_0.1345T	4
9	JEOM-055-002	JEOMETRI BASE WELDMENT BASEPLATE - 18	A-1	SM_A36_0.1345T	2
10	JEOM-056-000	JEOMETRI SEAT WELDMENT END FLANGE	A-1	SM_A36_0.075T	3

\*\* ITEMS NOT PROVIDED

# GLOSSARY

## METAL TUBE

**SQ\_A500\_2X2\_0.065T**

TYPE

MATERIAL

SIZE

MATERIAL  
THICKNESS

## SHEET METAL

**SM\_A36\_0.065T**

TYPE

MATERIAL

MATERIAL  
THICKNESS

### Type





SQ = Square tube profile  
RT = Rectangle tube profile  
CR = Circle tube profile  
AG = Angle tube profile  
SM = Sheet Metal

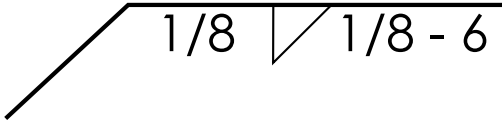
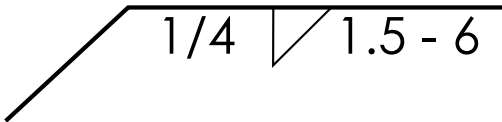
### Material Thickness

10ga – 0.1345"  
12ga – 0.1035"  
14ga – 0.075"  
16ga – 0.065"

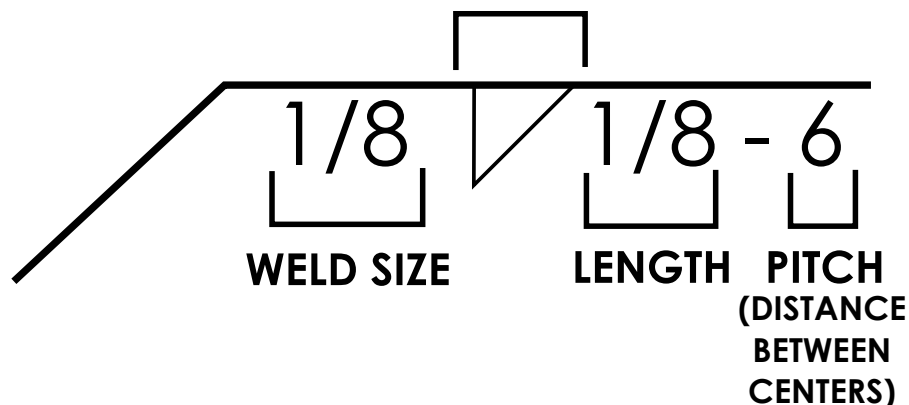
# AWS SYMBOLS

The following are some of the common weld symbols you will encounter when reading our assembly instructions.

AWS SYMBOL	NAME	DESCRIPTION
	<b>FILLET WELD</b>	Triangular weld joining two surfaces at right angles; common in T-joints and lap joints.
	<b>SEAM WELD</b>	Joins metal using a hole in the top piece, fusing with the bottom piece.
	<b>SPOT WELD</b>	Used for fusing overlapping metals at discrete points; often used in sheet metal fabrication.
	<b>PLUG WELD</b>	Process creating a consistent weld along overlapping materials; suitable for containers and cylindrical assemblies.

WELD INDICATION	DESCRIPTION
	<b>TACK WELD</b> (Small and temporary weld that hold parts together ready for final welding.)
	<b>FULLY WELD</b> (Last welding operation performed to complete a joint or structure, ensuring its integrity.)

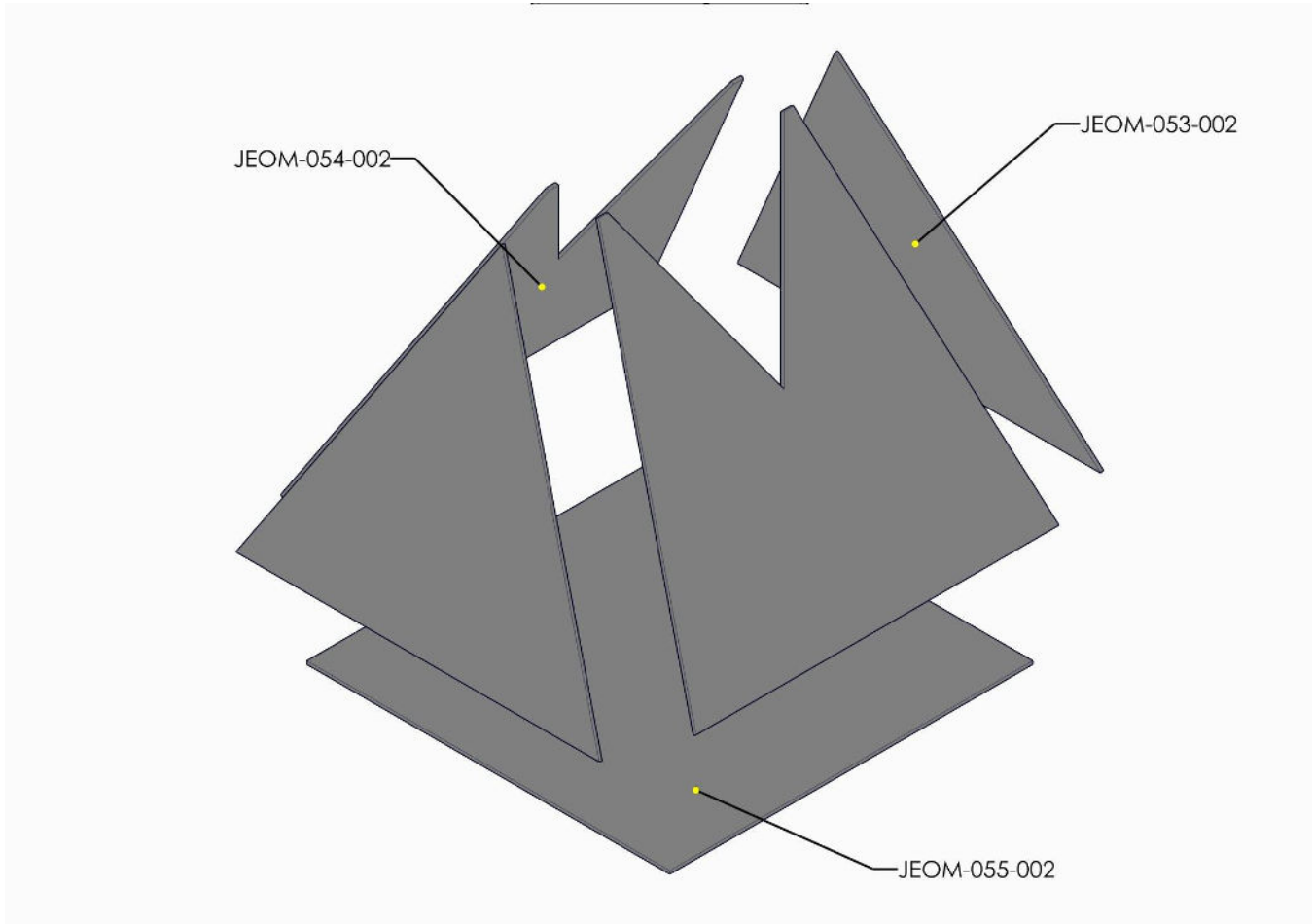
## WELD SYMBOL



This symbol tells us to make a 1/8" high Fillet Weld, 1/8" long (a "tack"), and to do so along the seam every 6" (the pitch).

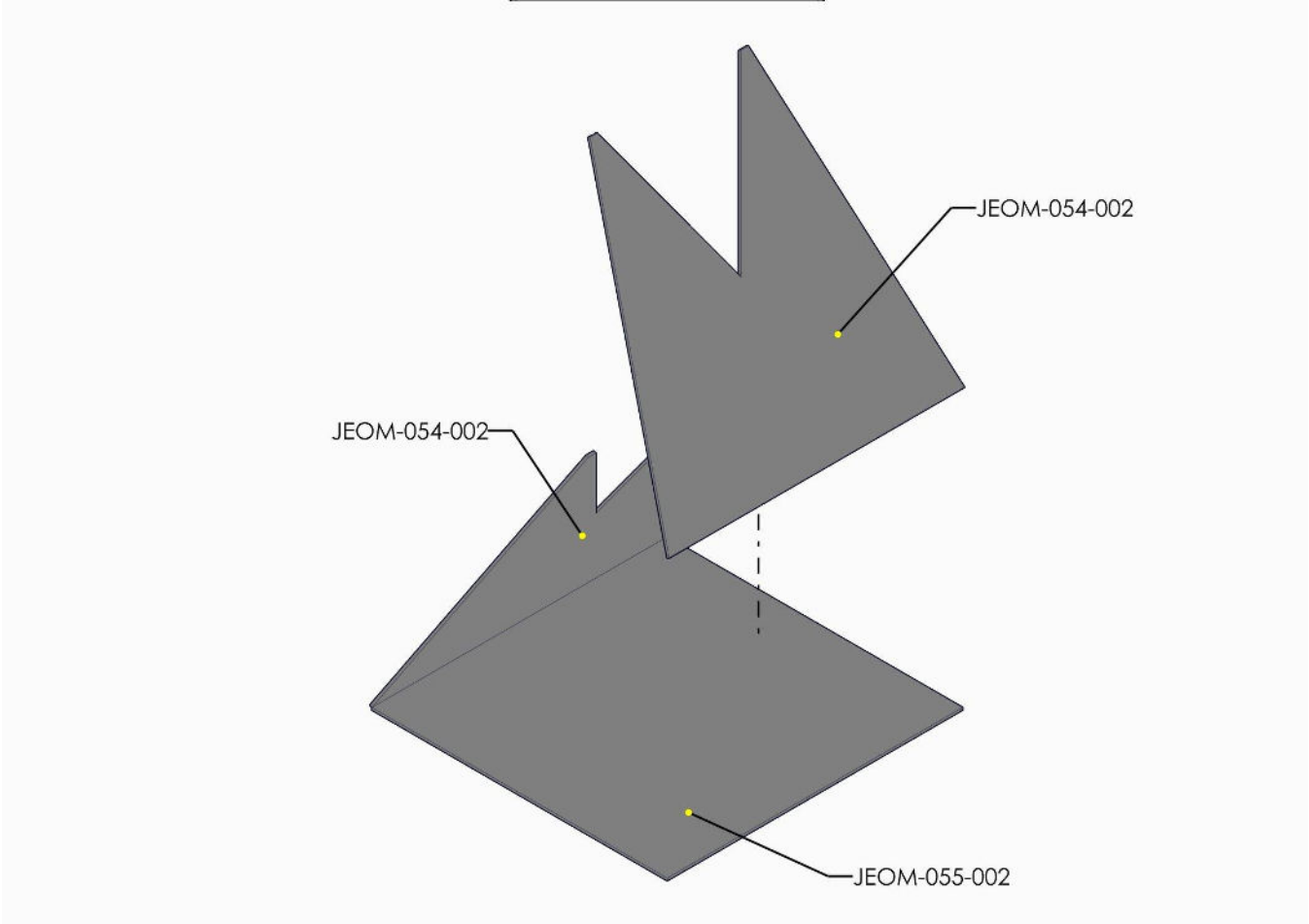
# ASSEMBLY INSTRUCTIONS

## 1



### NOTES:

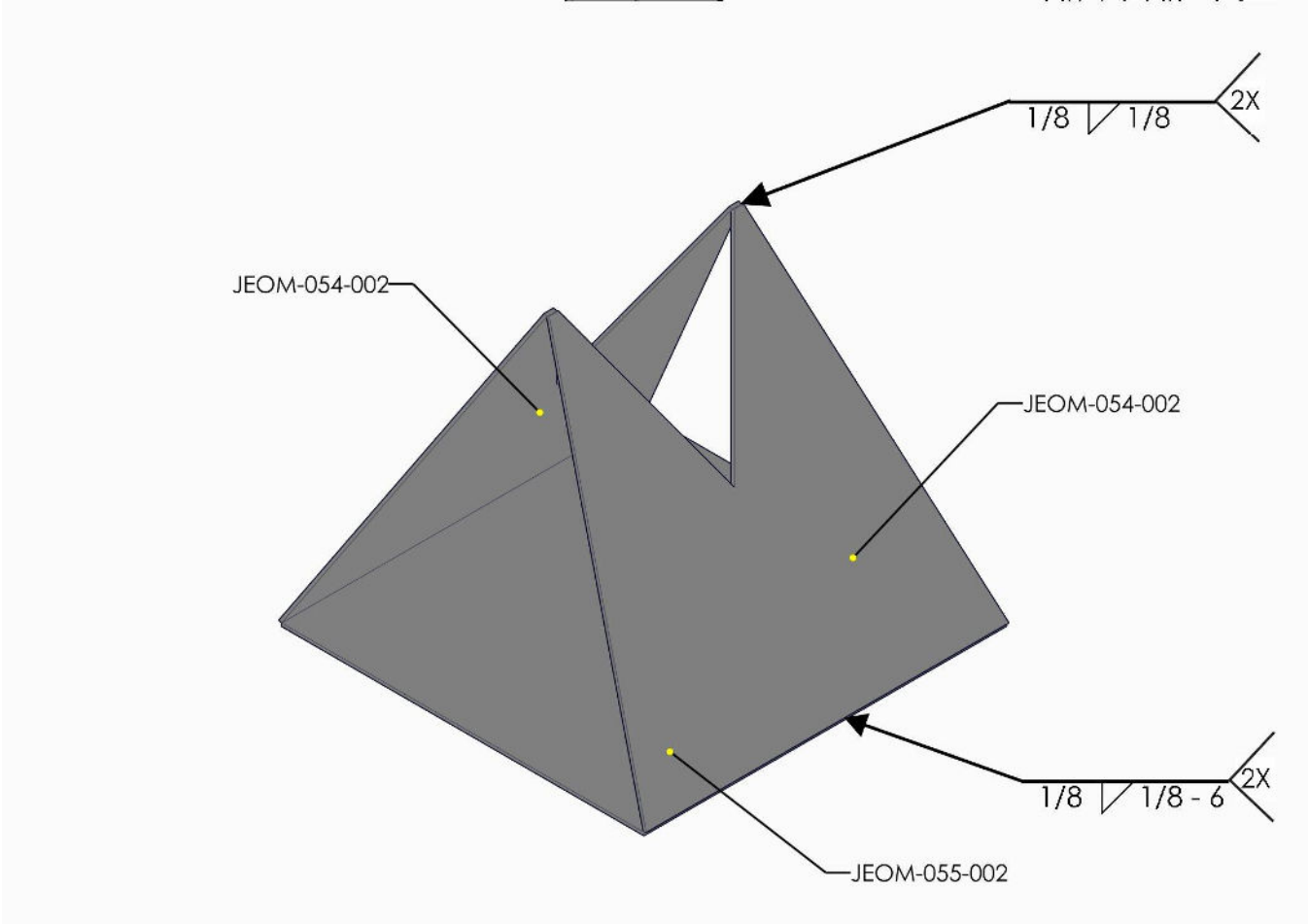
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NOTES:

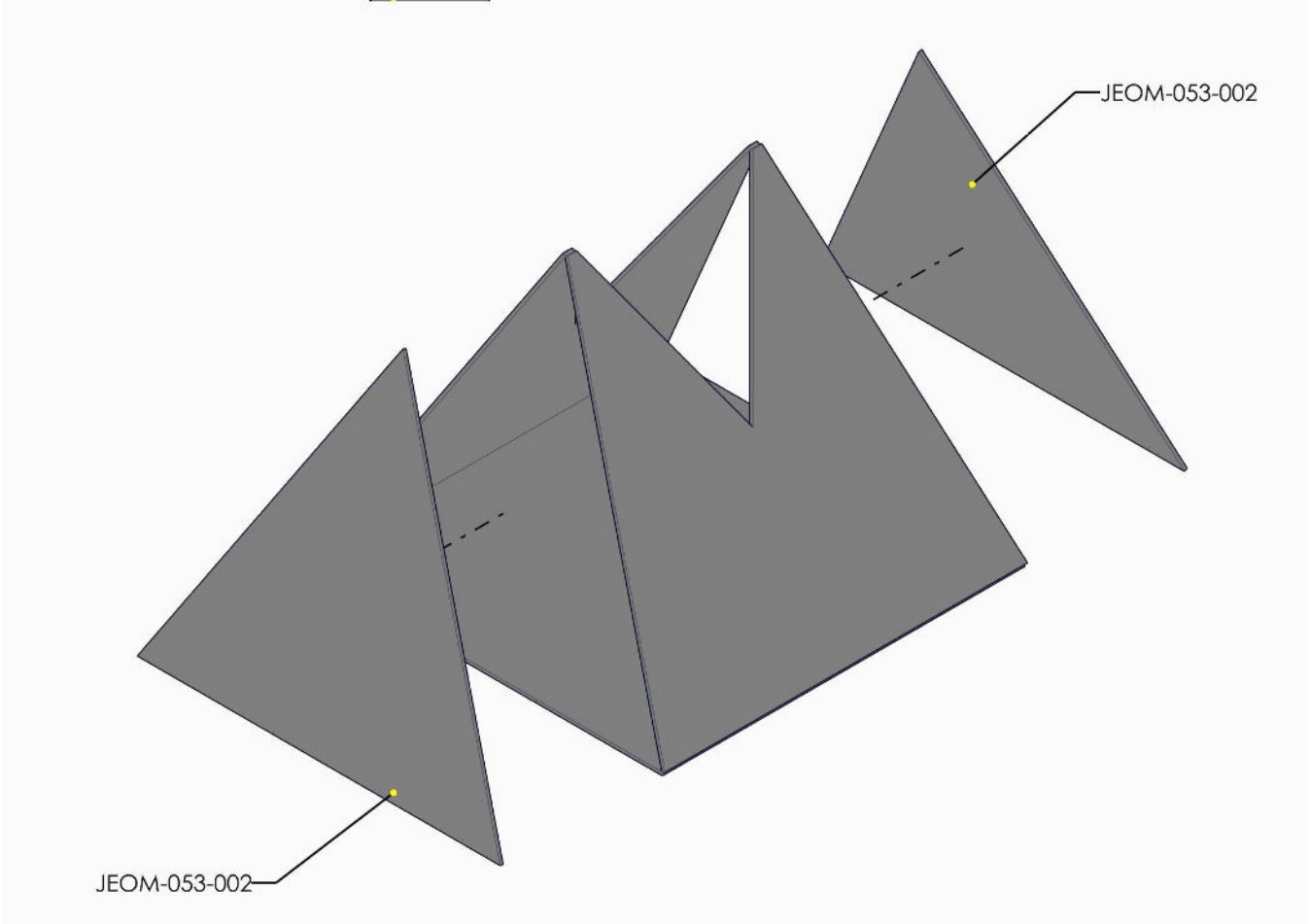


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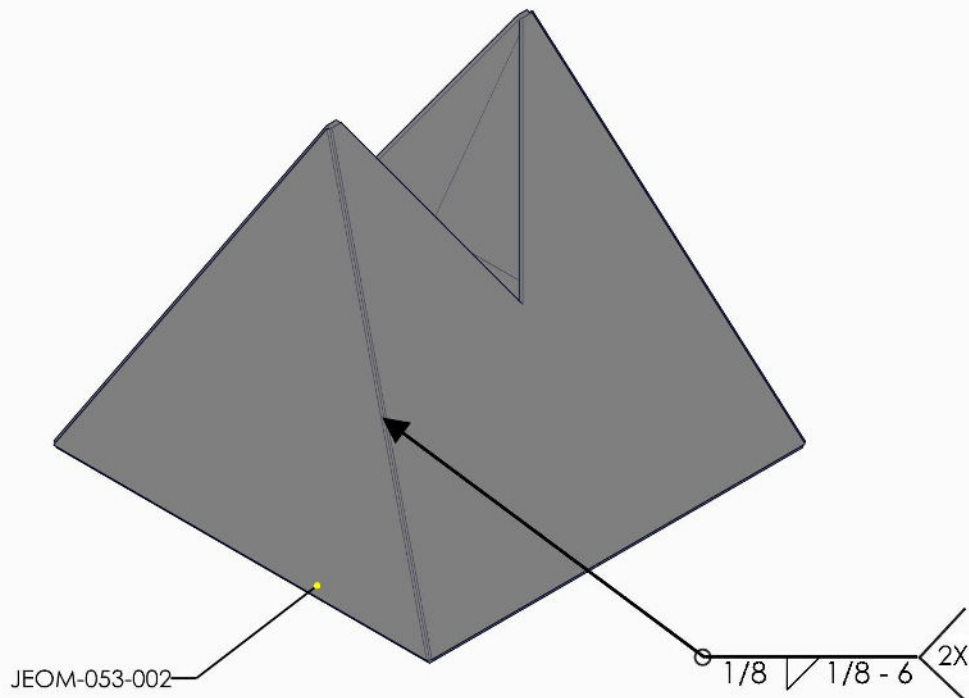
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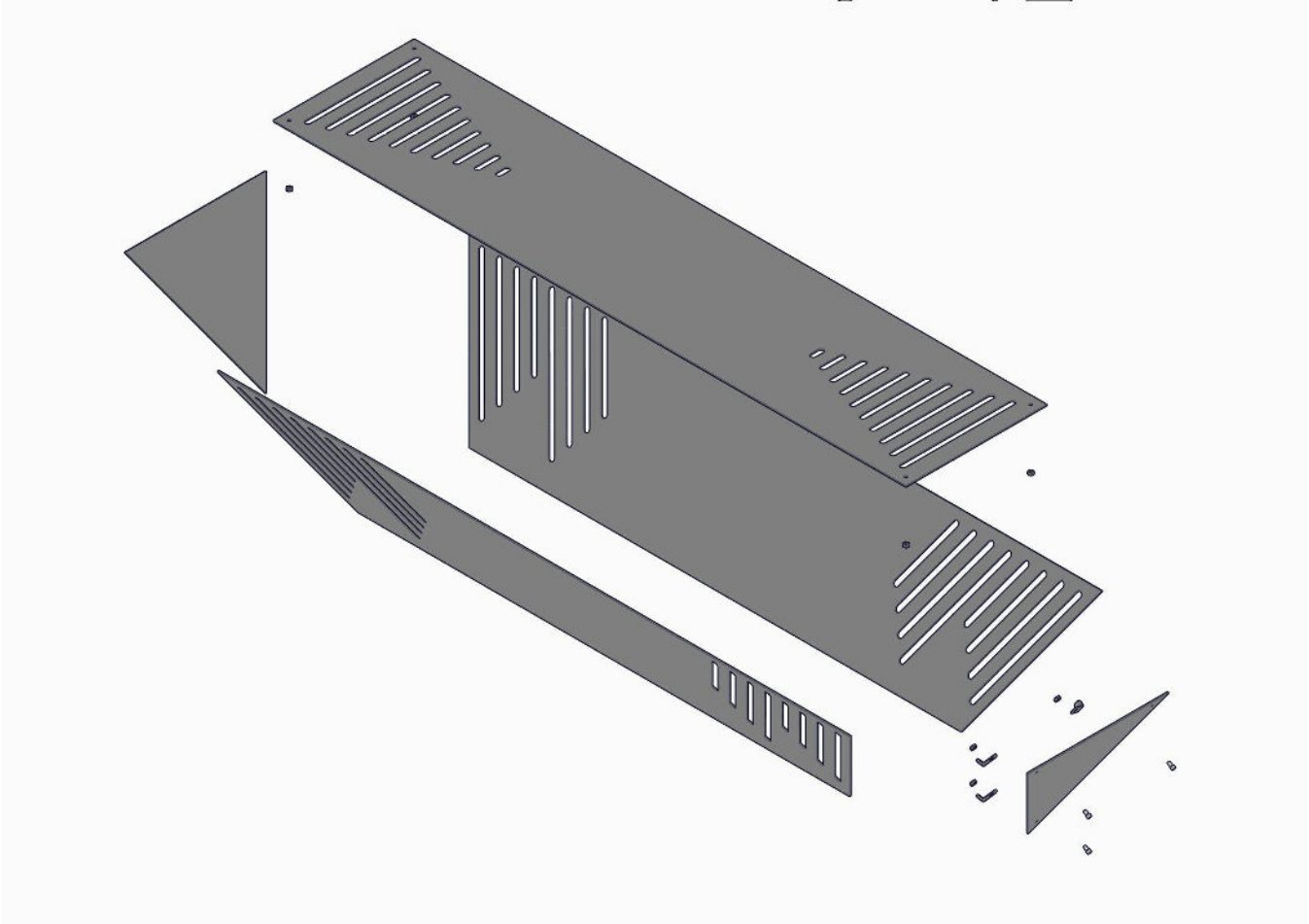
**NOTES:**

# 5

**NOTES:**

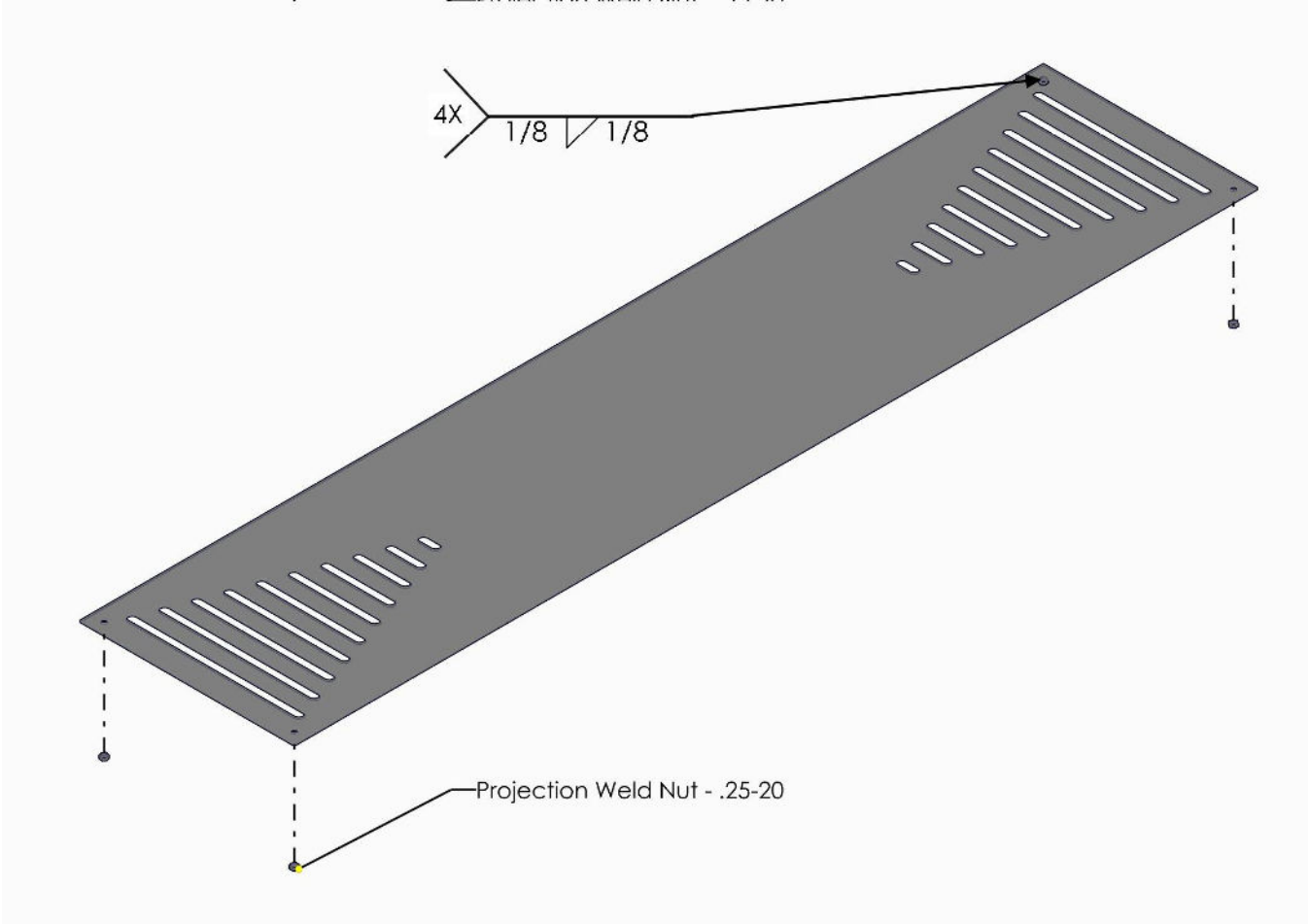
**REPEAT STEPS 1 – 5 FOR REMAINING LEG BASE**

6



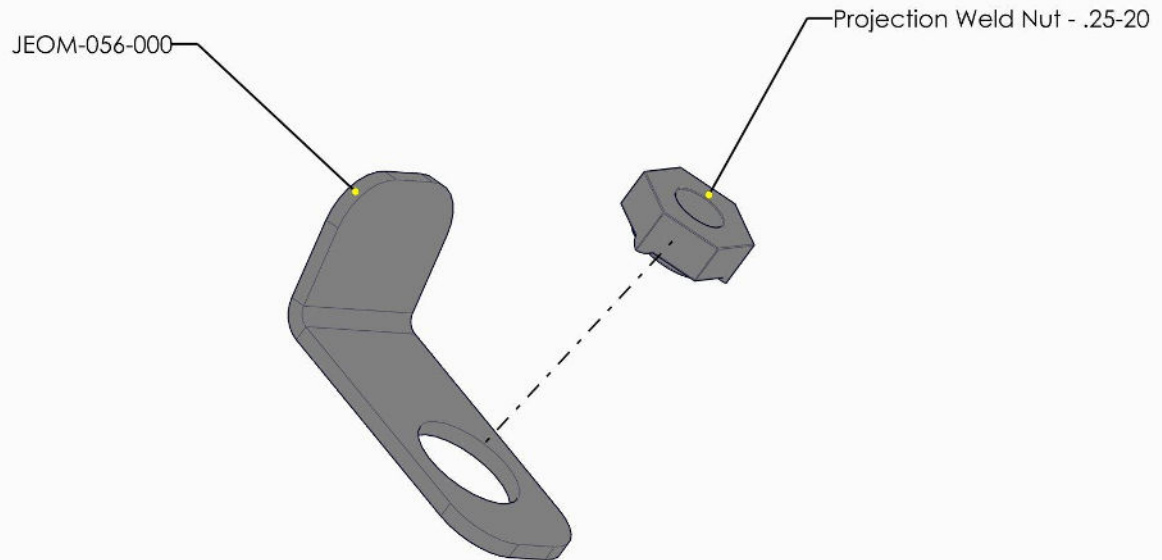
**NOTES:**

7

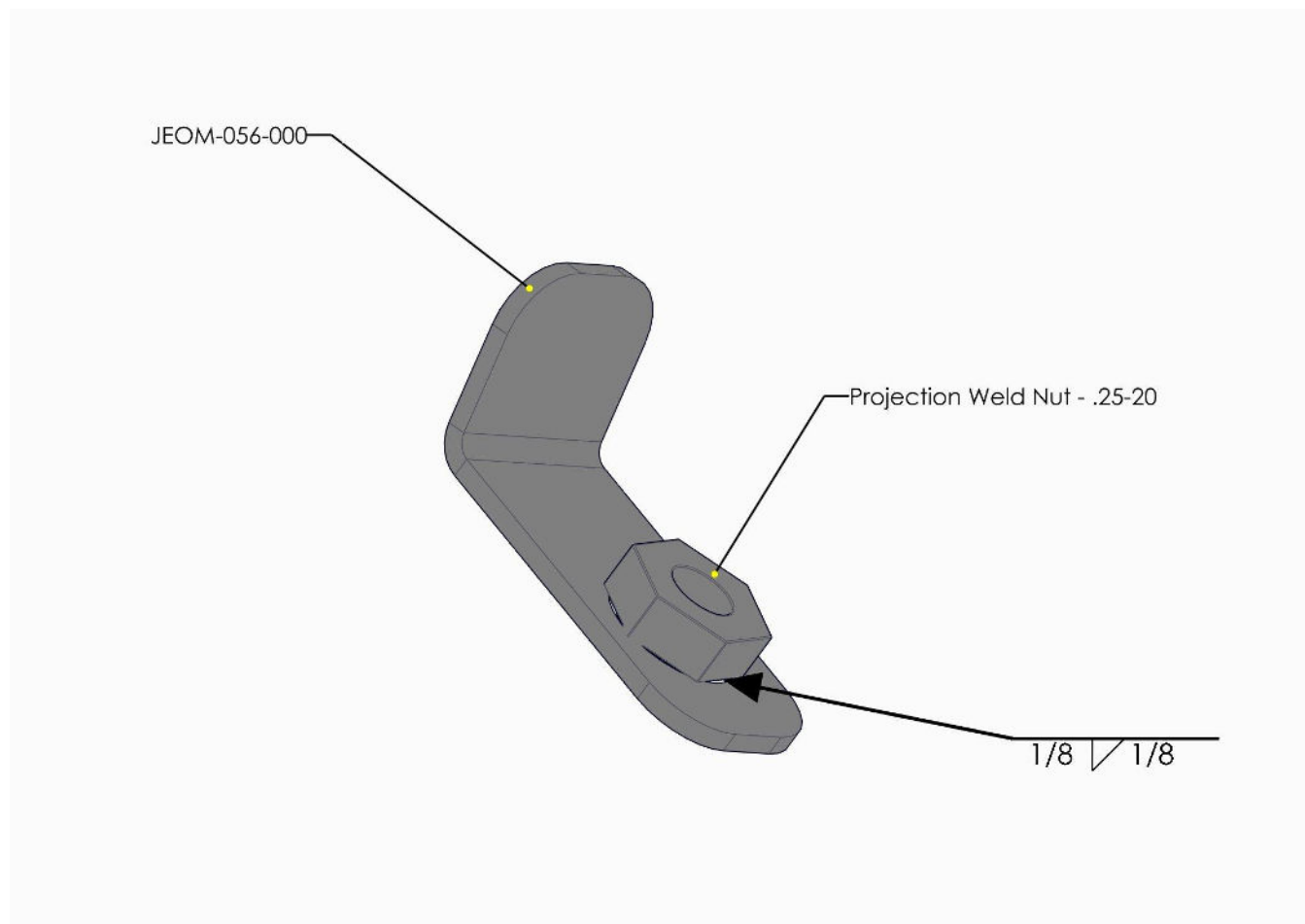


**NOTES:**

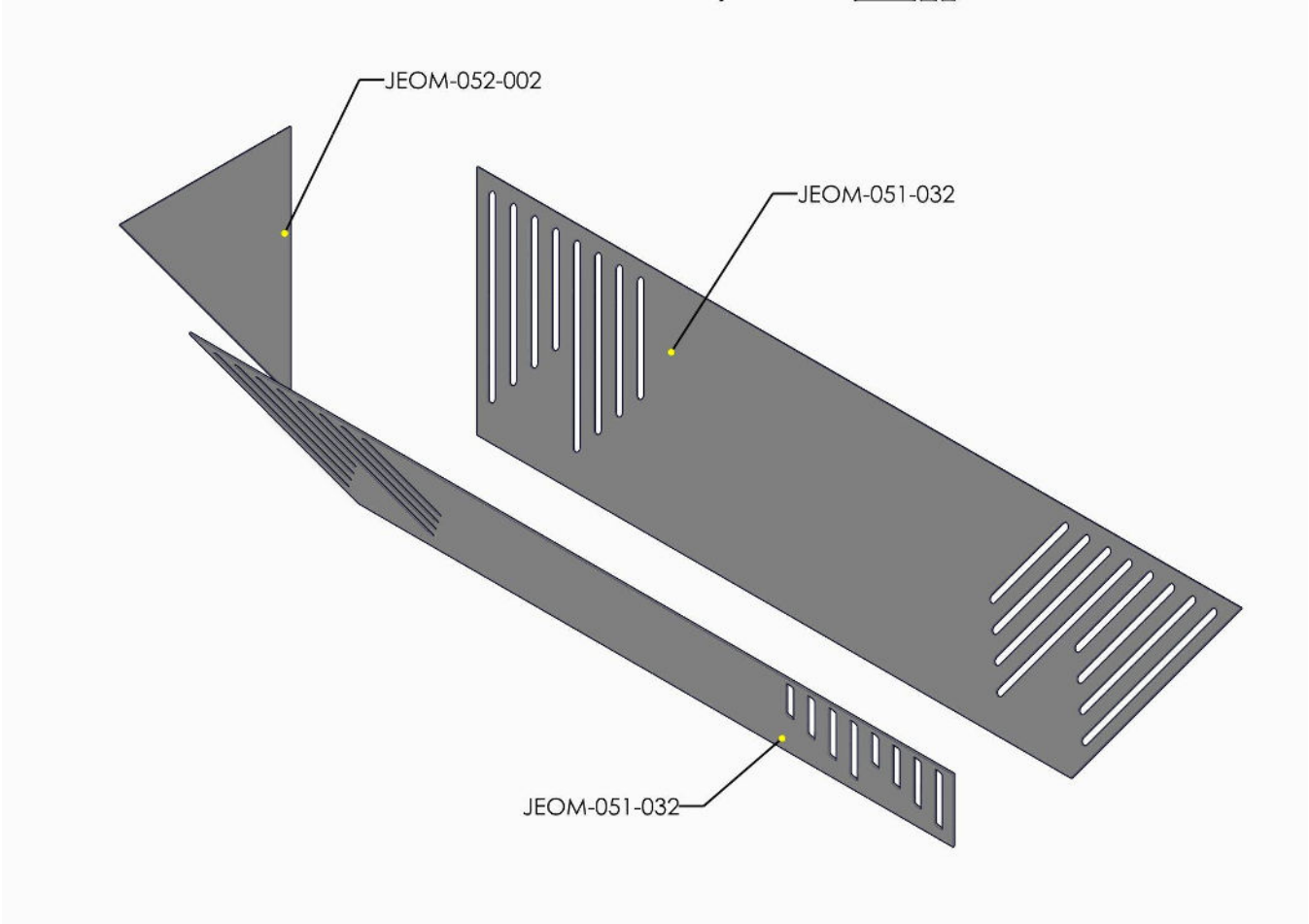
# 8



## NOTES:

**9****NOTES:****REPEAT STEPS 8 – 9, FOR REMAINING FLANGES**

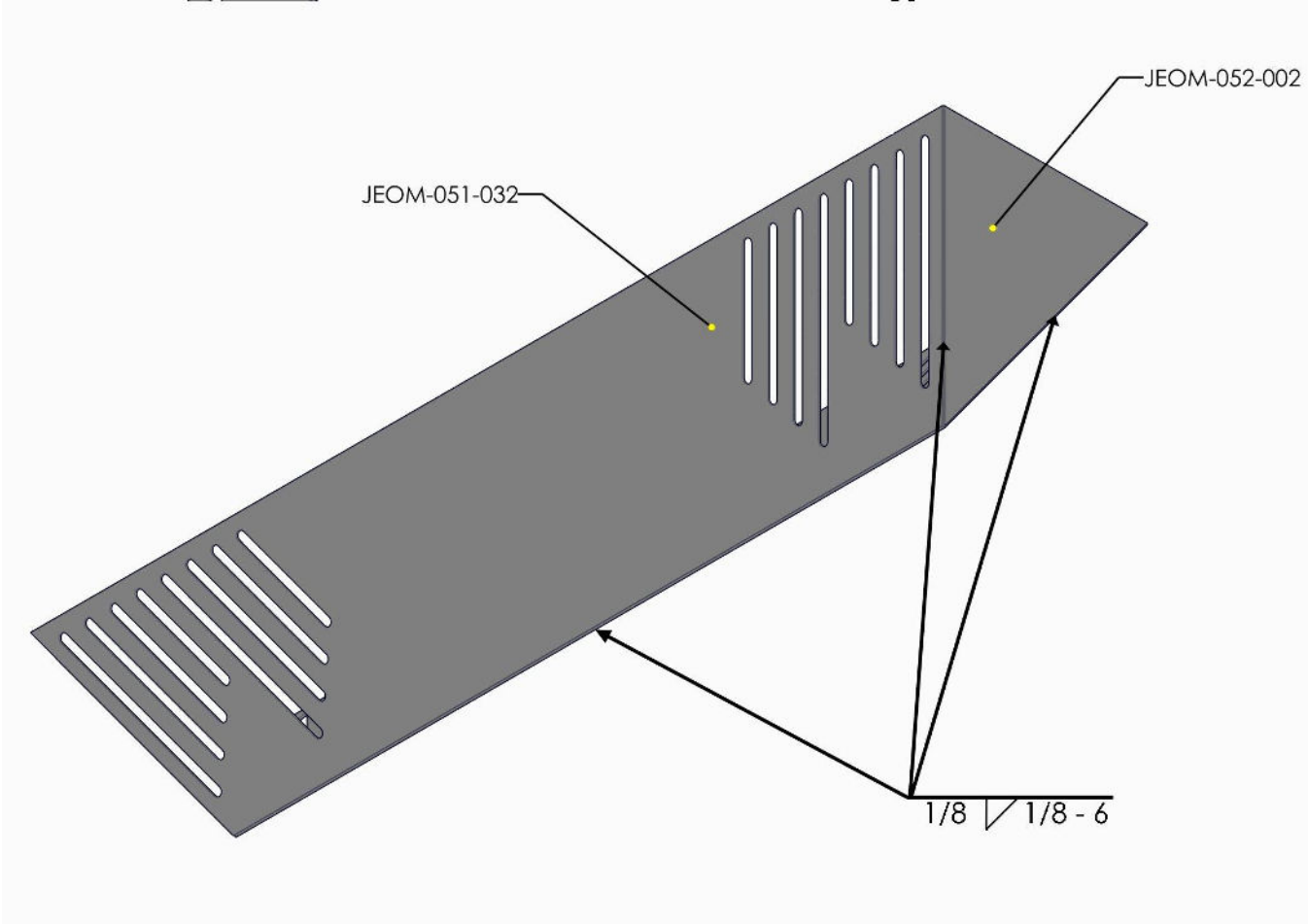
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**NOTES:**

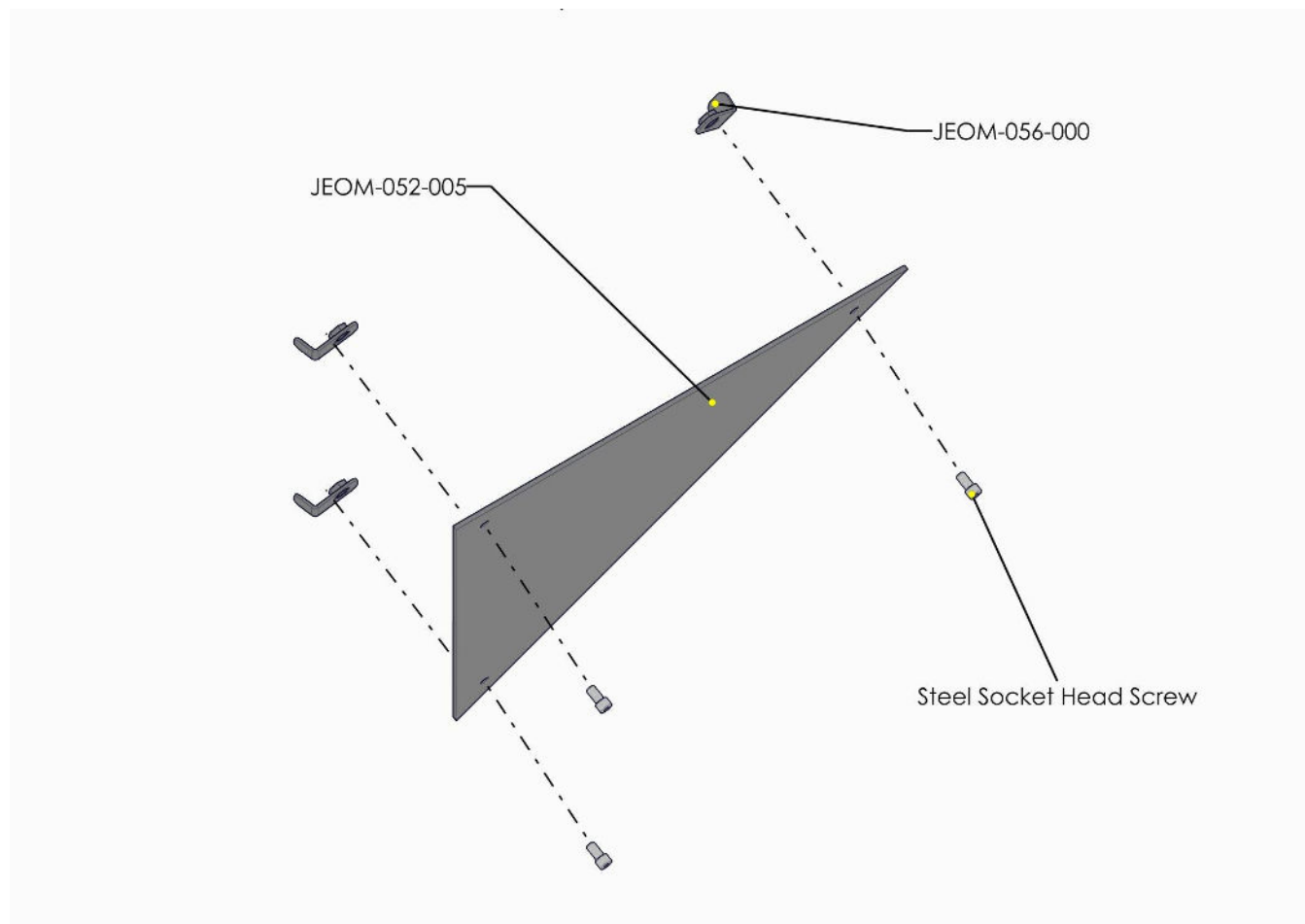


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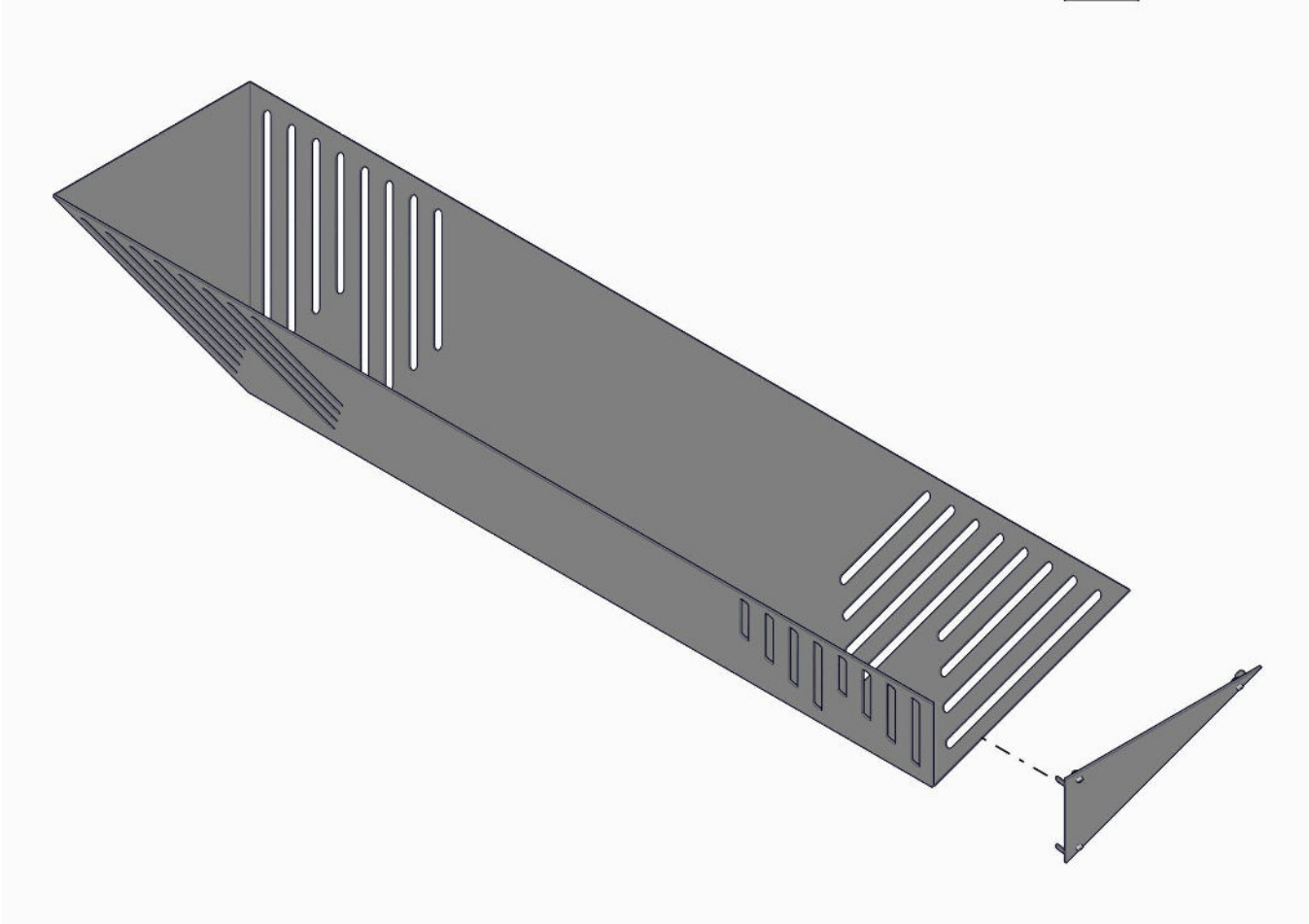
NOTES:

# 12

**NOTES:**

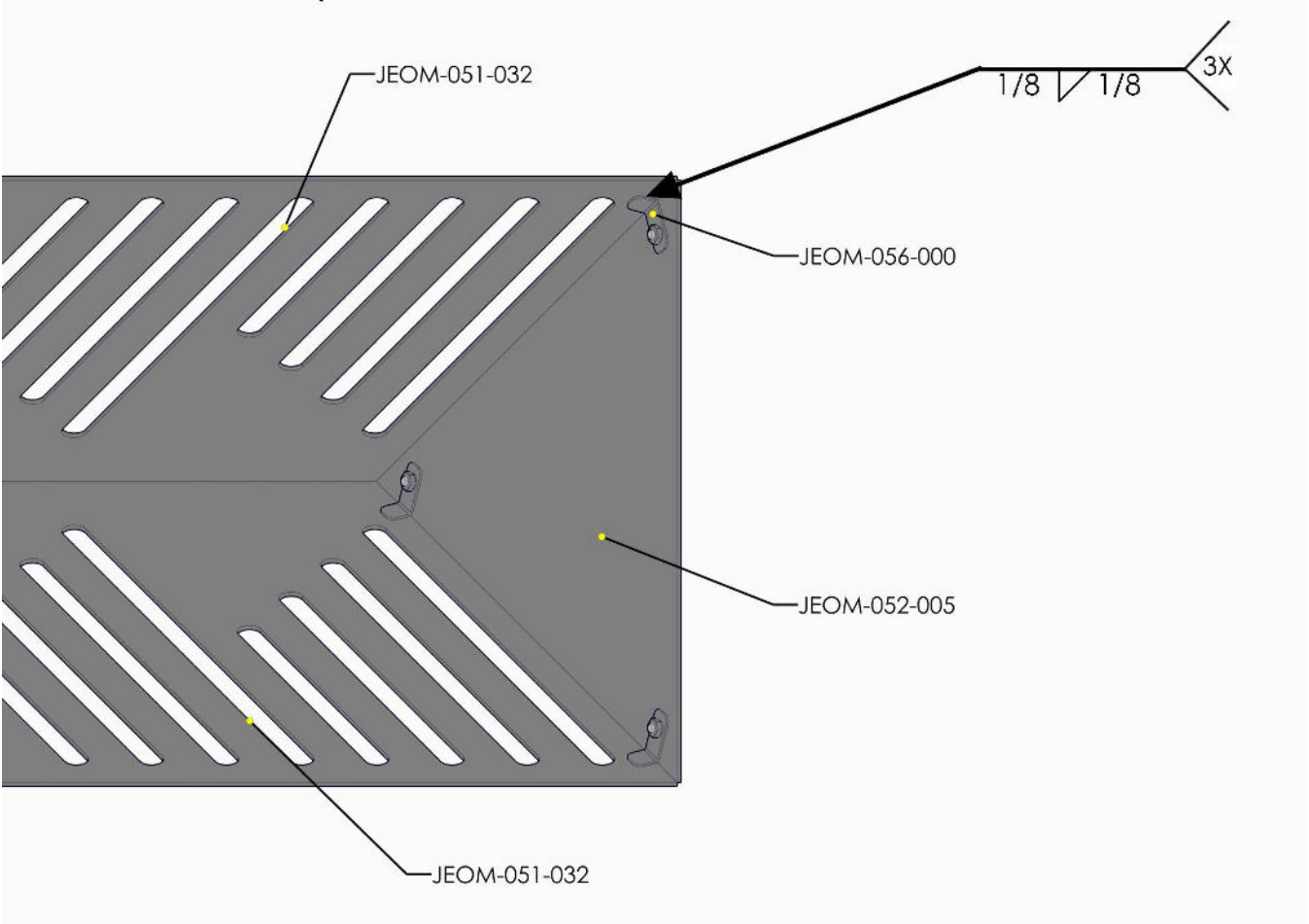
**REPEAT STEPS 1 TRHU 11 FOR OTHER PAIR OF LEGS**

# 13



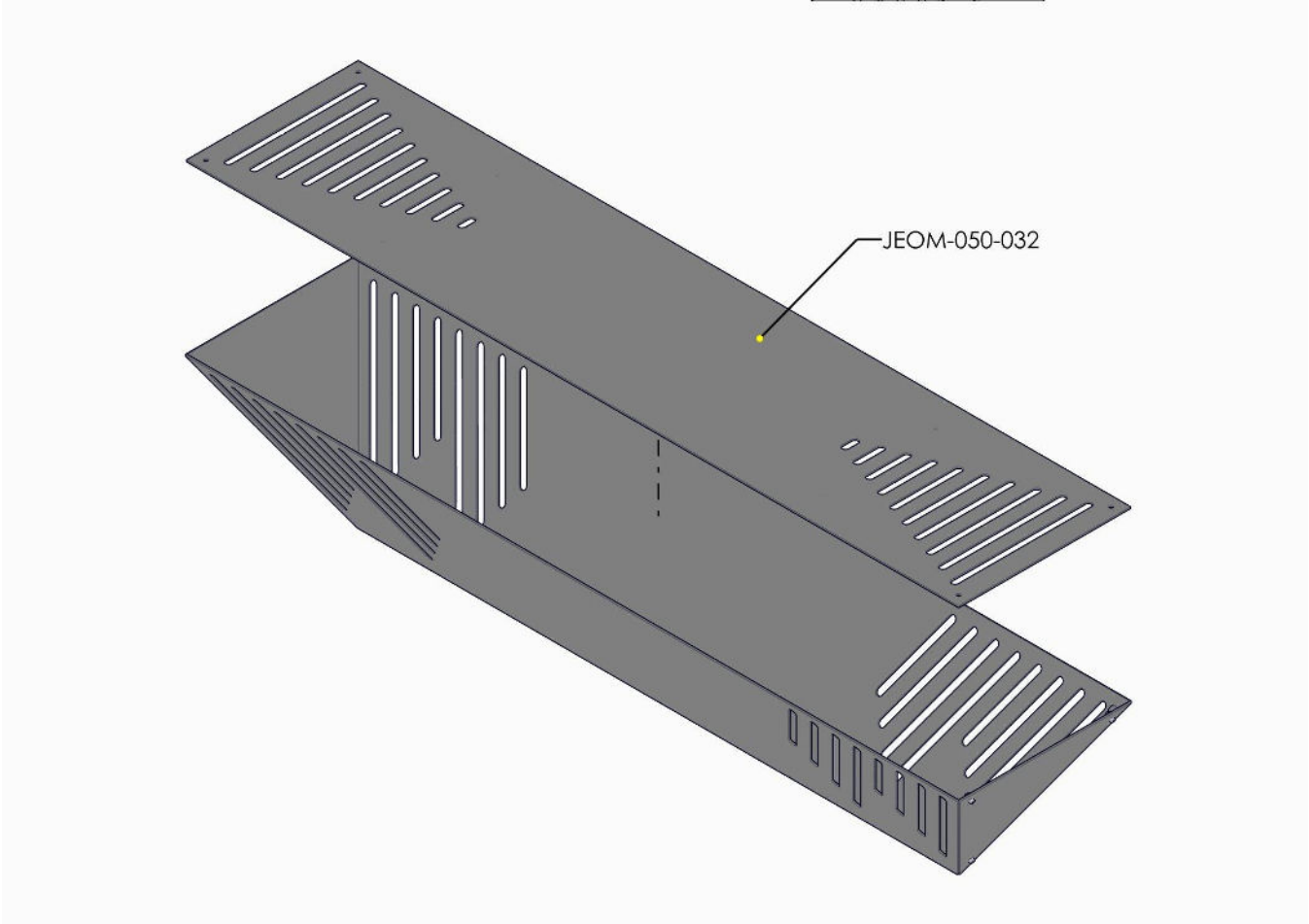
**NOTES:**

14



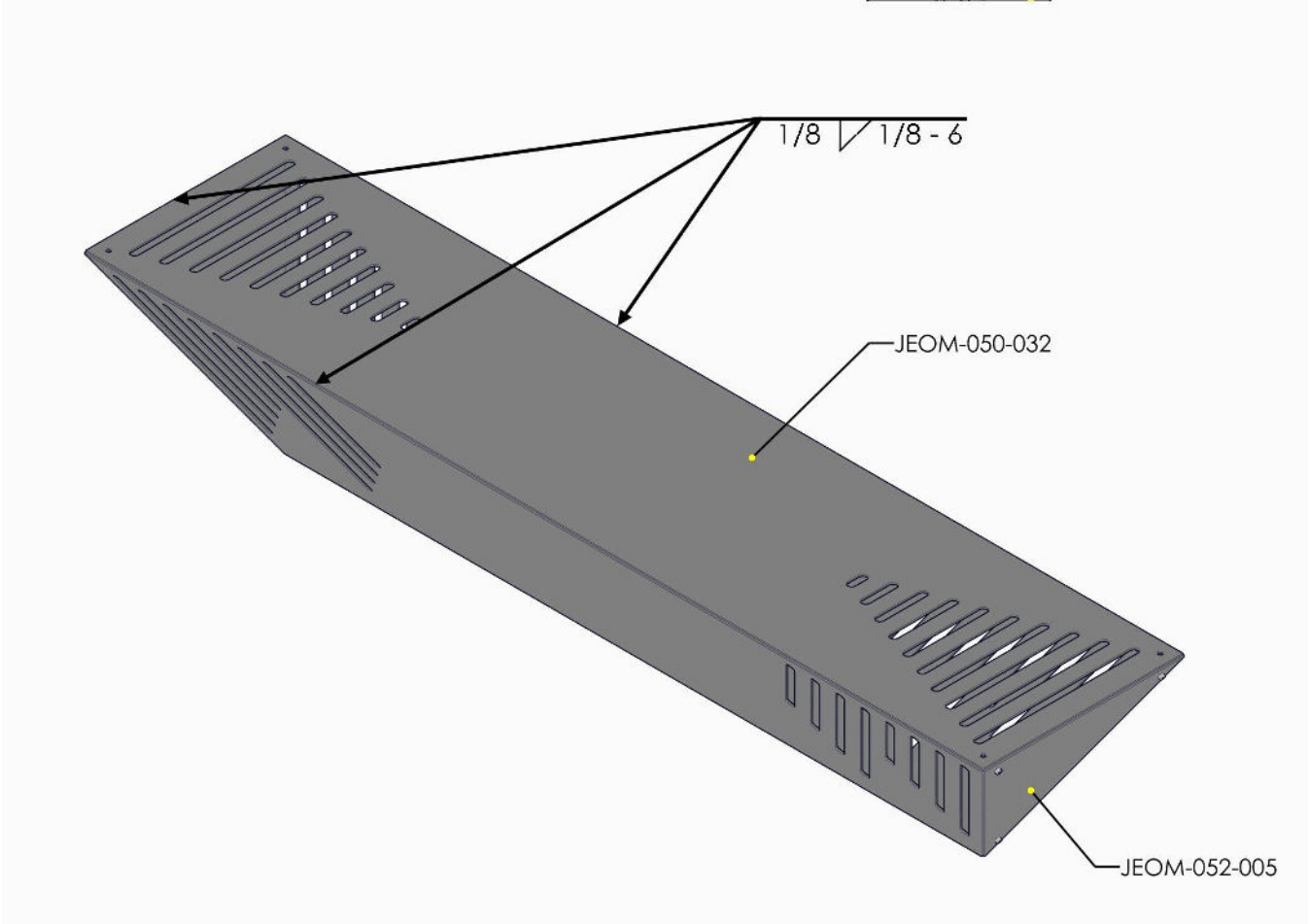
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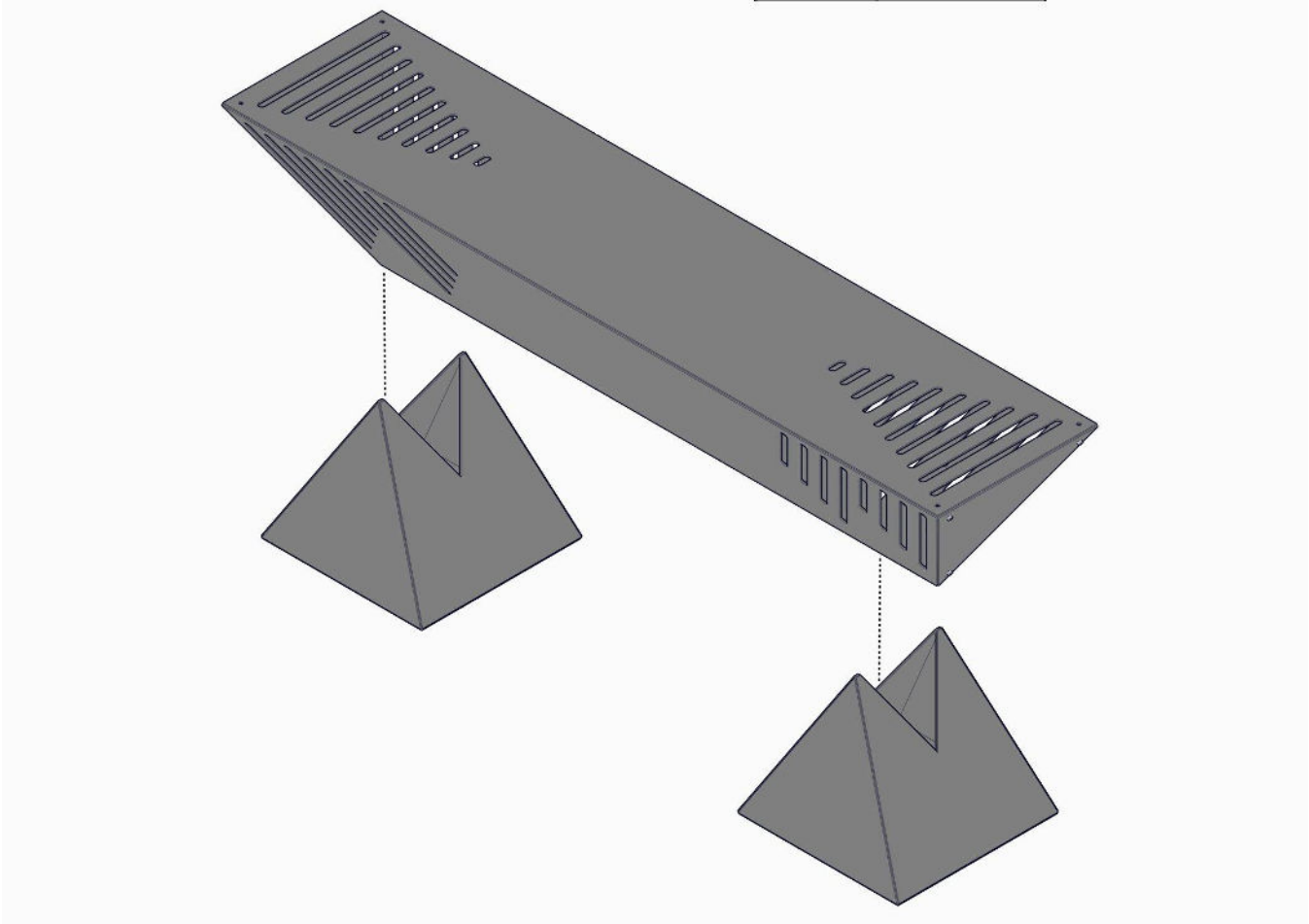
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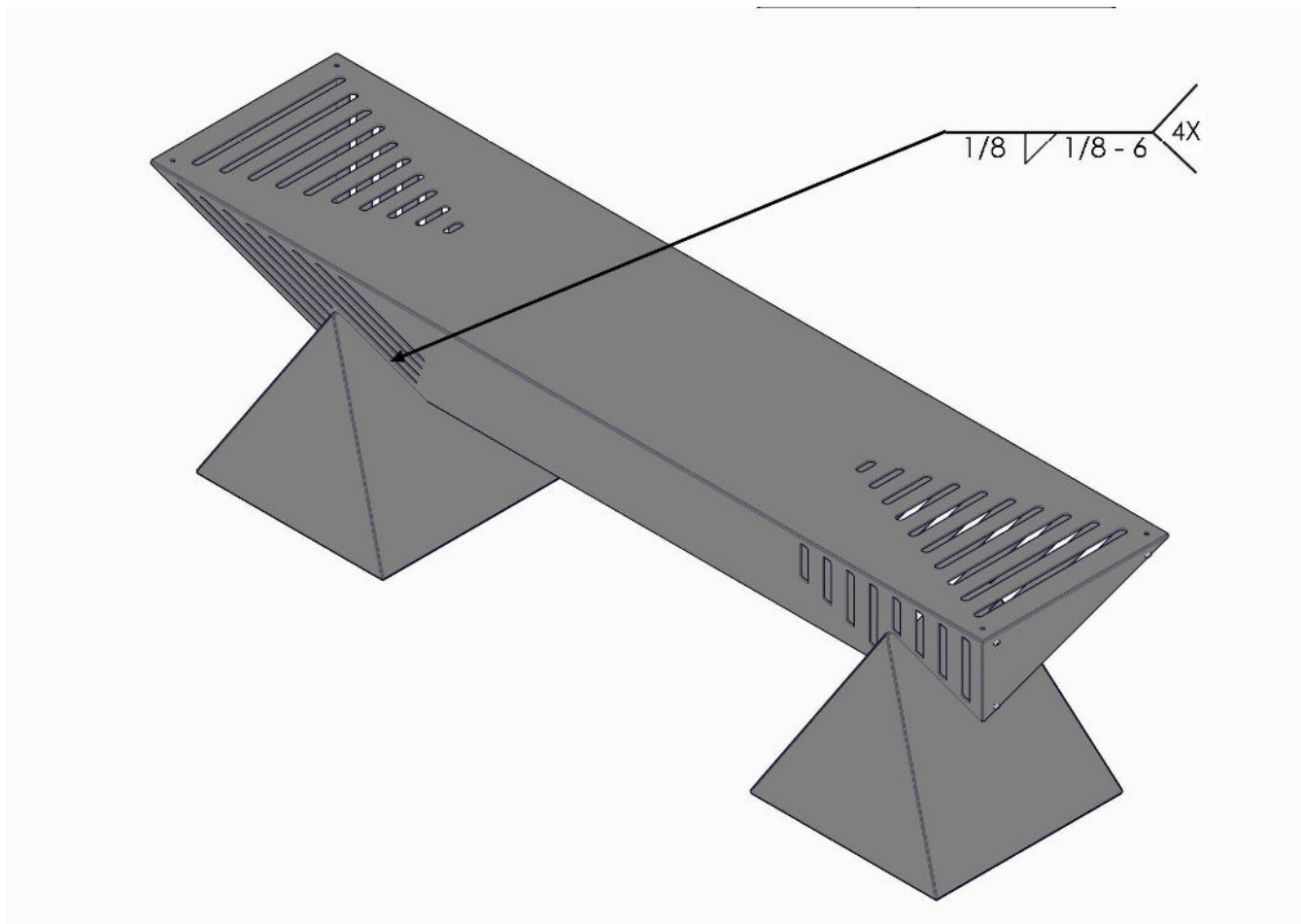
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17



**NOTES:**

# 18

**NOTES:**

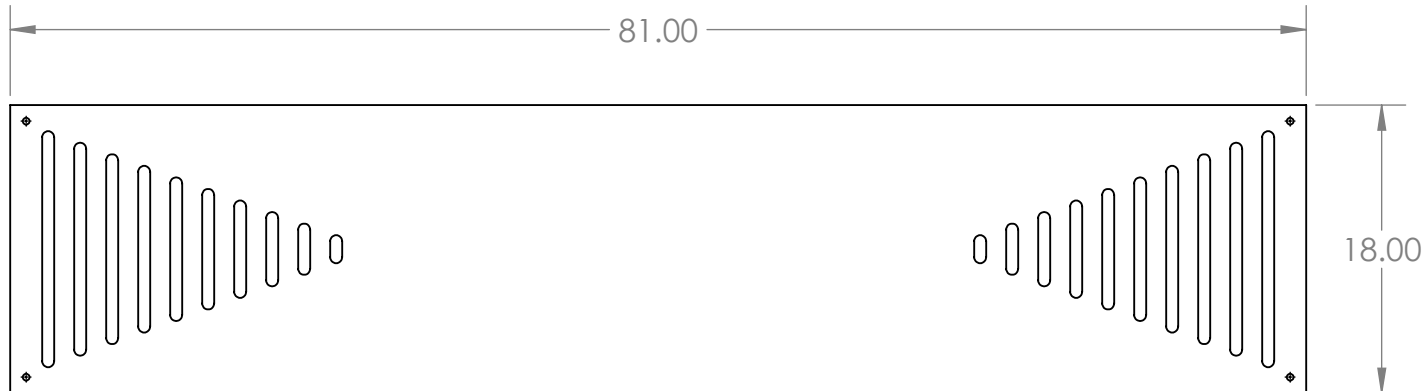
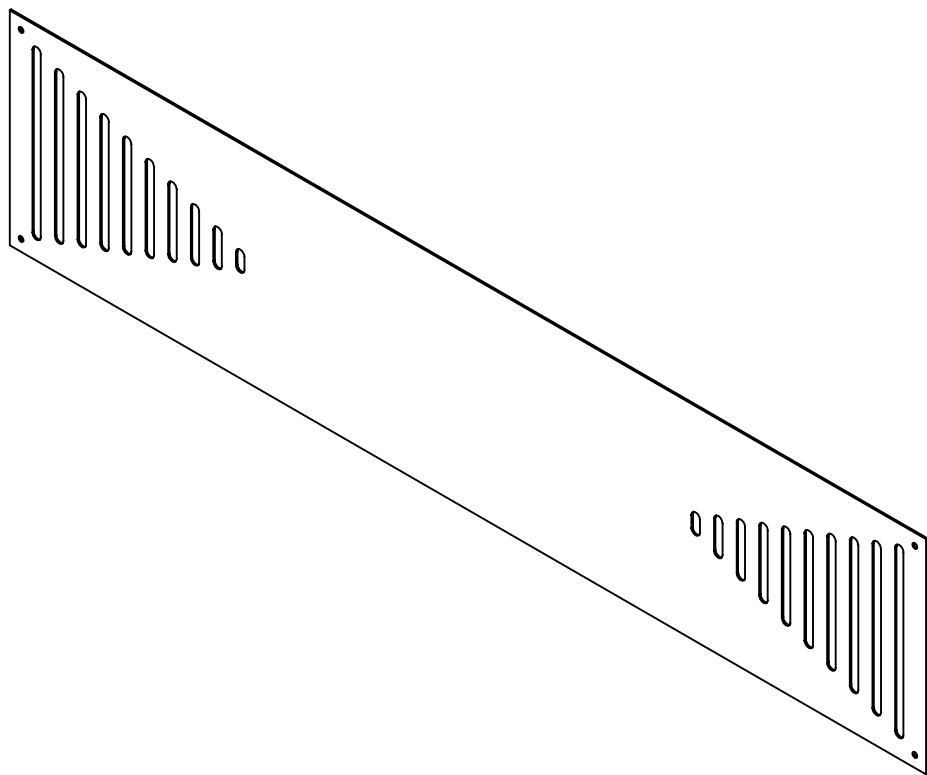
**NOW IS THE PERFECT TIME TO GO BACK AND FINISH WELDING ALL THE PREVIOUS TACK WELDS**

**WE RECOMMEND A 0.25" HIGH FILLET WELD, 1.5" LONG**



# PART DRAWINGS

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



DIMENSIONS ARE IN INCHES, UNLESS SPECIFIED OTHERWISE

**WELD PROJECTS** COM

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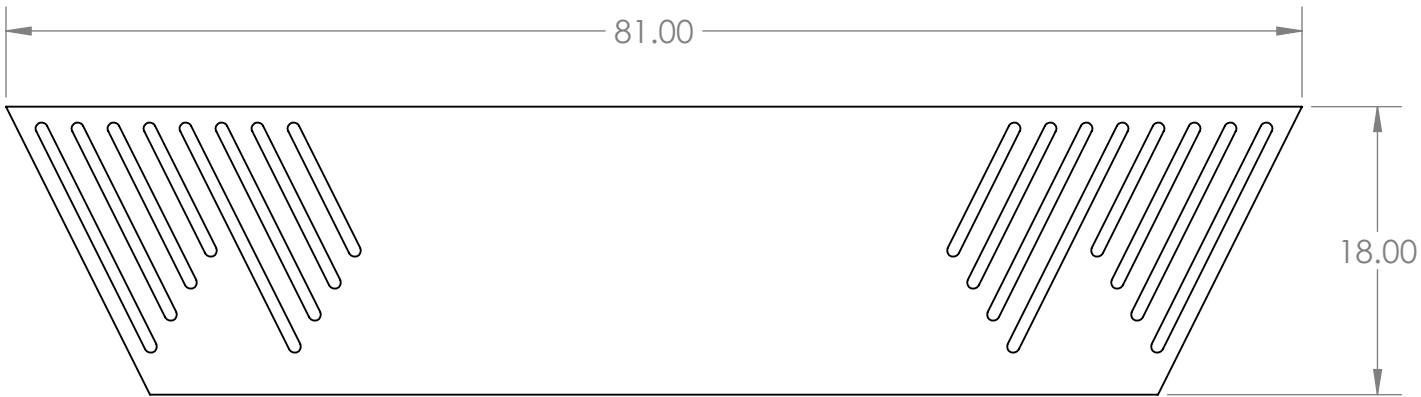
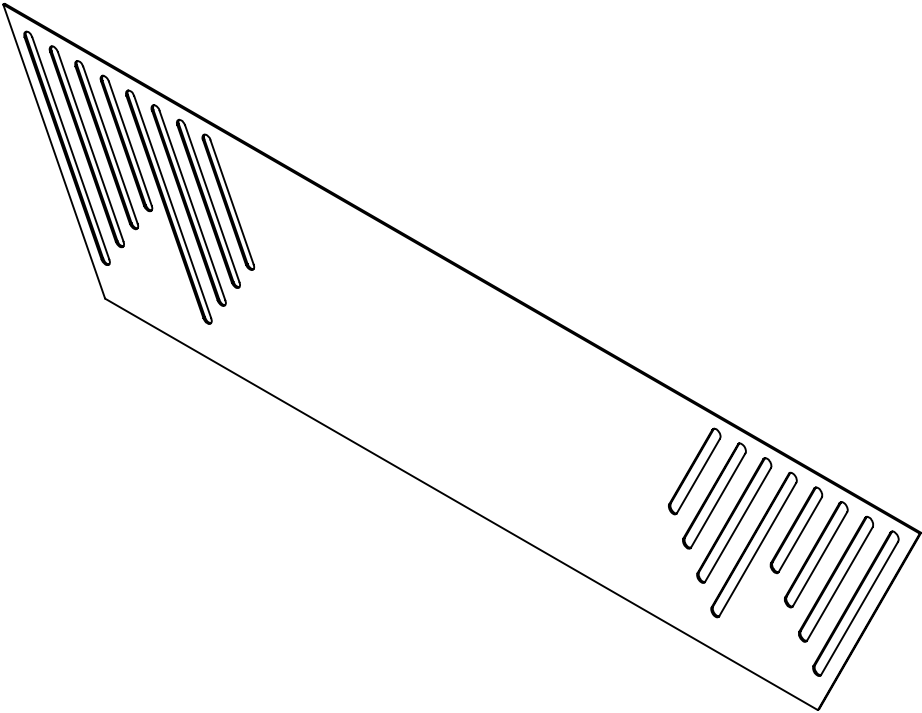
**PART #**  
JEOM-050-032

**MATERIAL**  
SM\_A36\_0.1345T

**DESCRIPTION :**  
JEOMETRI SEAT WELDMENT TOP - 81x18 - WAVES

**DRAWN BY:** NFontes | 04/16/23 **SHEET 1 OF 1**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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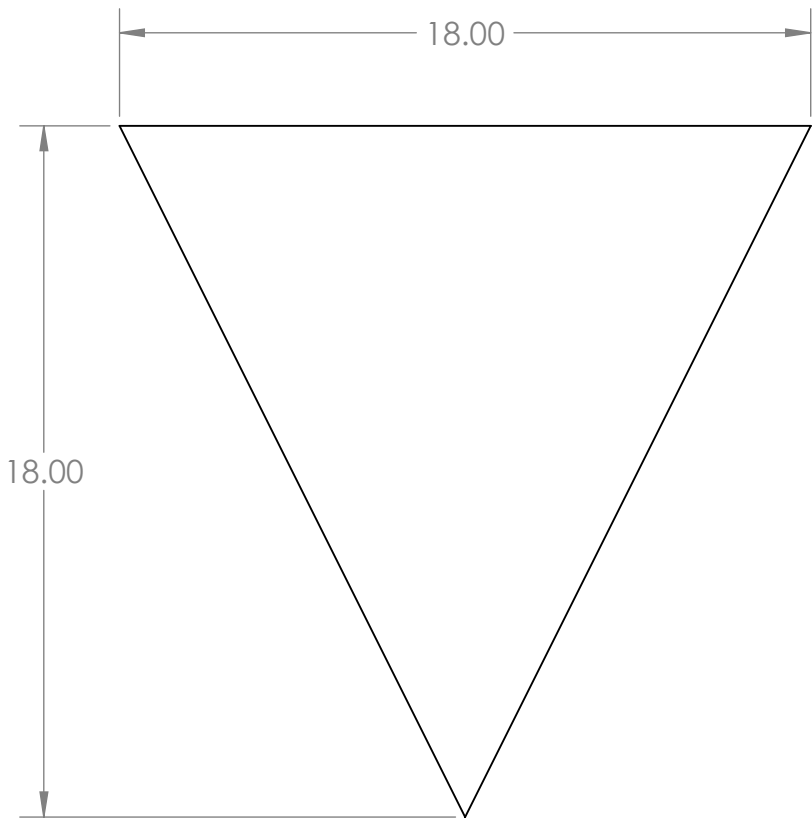
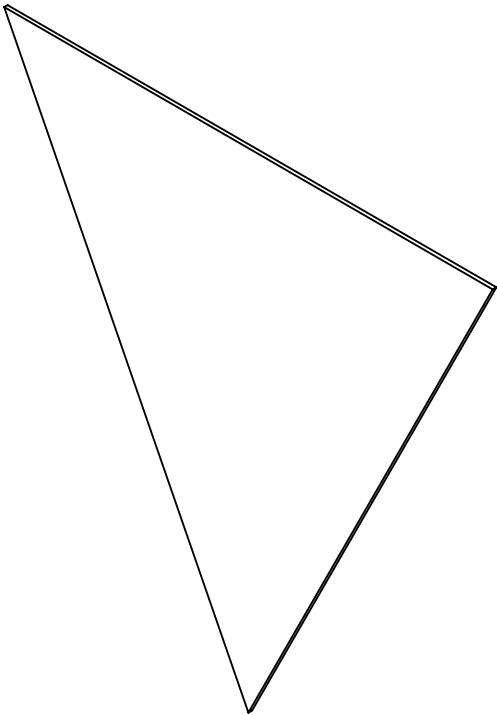
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<b>PART #</b>	<b>MATERIAL</b>
JEOM-051-032	SM_A36_0.1345T

**DESCRIPTION :**  
JEOMETRI SEAT WELDMENT SIDE - 81x18 - WAVES

**DRAWN BY:** Noe F | 04/16/23 **SHEET 1 OF 1**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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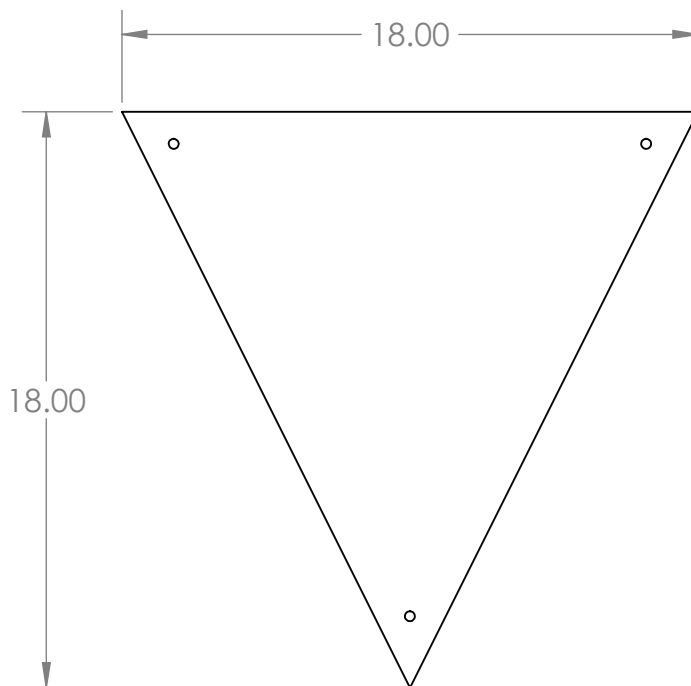
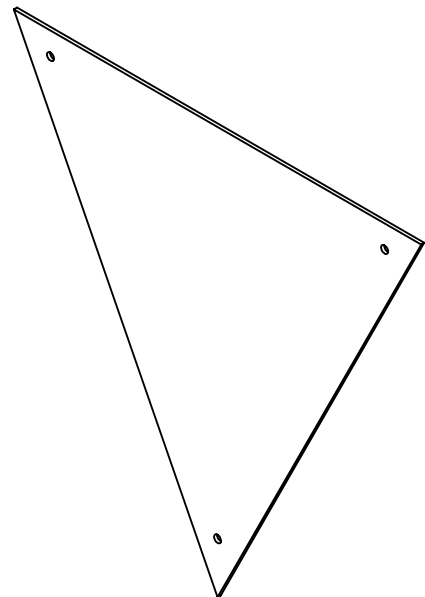
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<b>PART #</b> JEOM-052-002	<b>MATERIAL</b> SM_A36_0.1345T
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<b>DESCRIPTION :</b> JEOMETRI SEAT WELDMENT END - 18
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<b>DRAWN BY:</b> Noe F   04/16/23	<b>SHEET 1 OF 1</b>
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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**PART #**  
JEOM-052-005

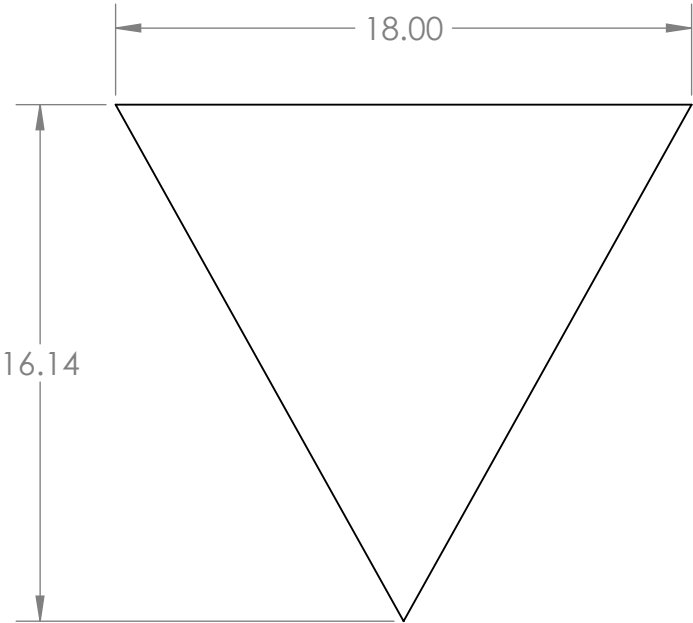
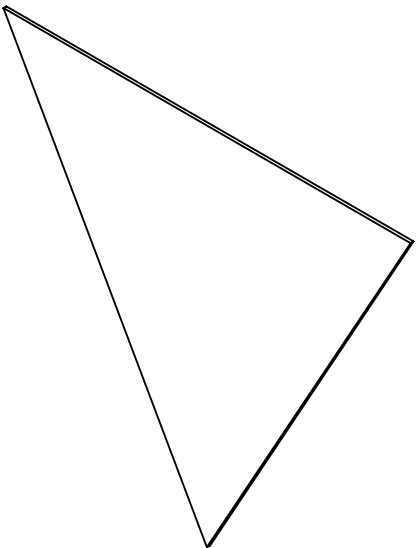
**MATERIAL**  
SM\_A36\_0.1345T

**DESCRIPTION :**  
JEOMETRI SEAT WELDMENT END BOLTABLE - 18

**DRAWN BY:** Noe F | 04/16/23

**SHEET 1 OF 1**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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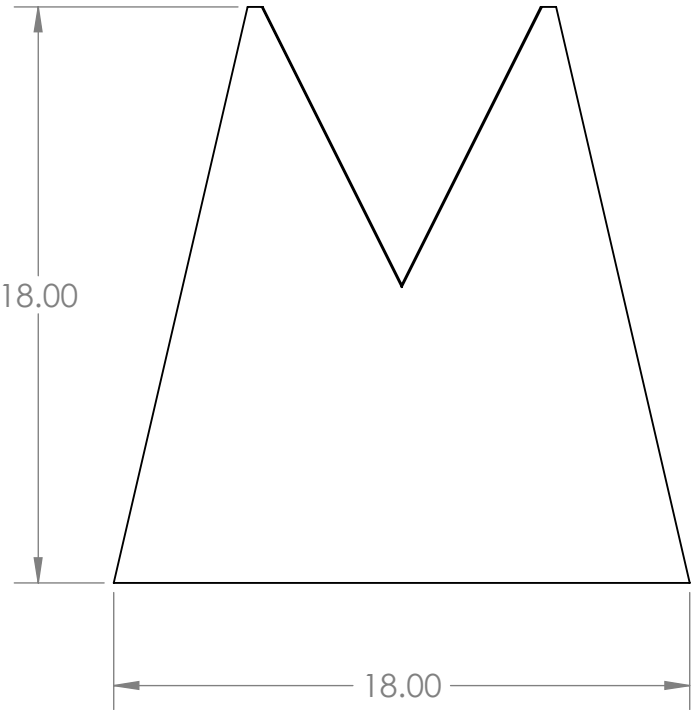
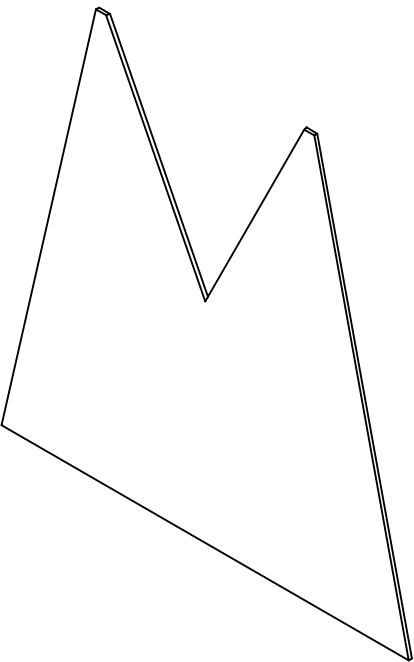
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<b>PART #</b> JEOM-053-002	<b>MATERIAL</b> SM_A36_0.1345T
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<b>DESCRIPTION :</b> JEOMETRI BASE WELDMENT SIDE - 18
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<b>DRAWN BY:</b> Noe F   04/16/23	<b>SHEET 1 OF 1</b>
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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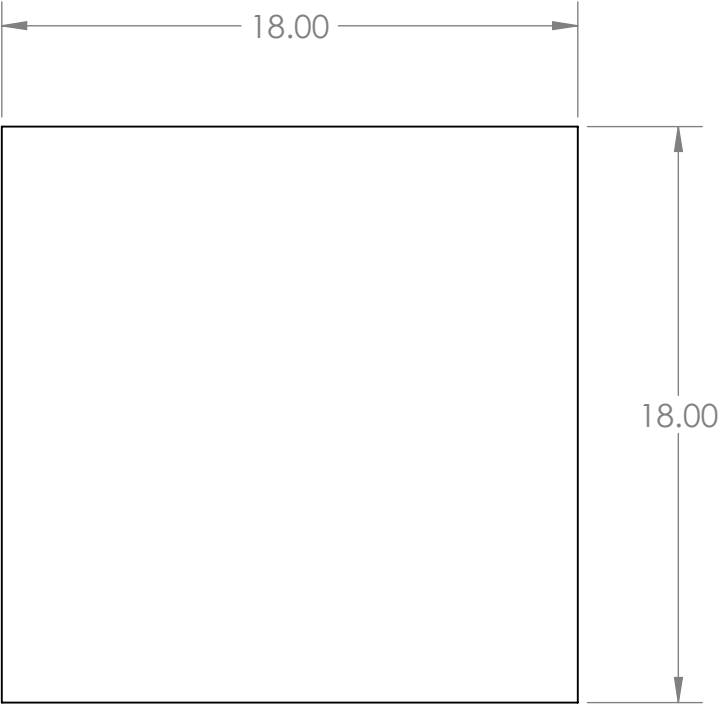
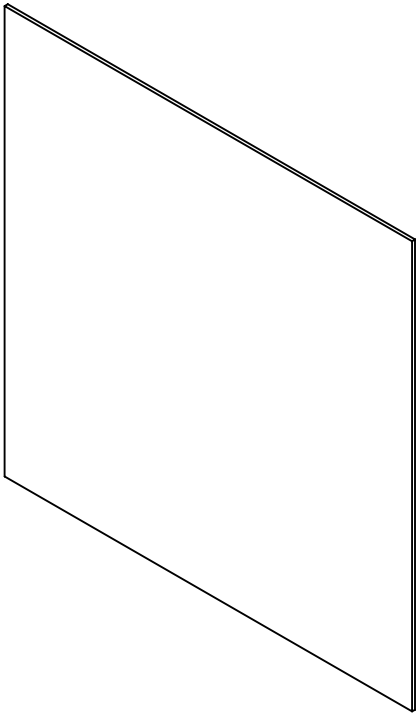
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<b>PART #</b> JEOM-054-002	<b>MATERIAL</b> SM_A36_0.1345T
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<b>DESCRIPTION :</b> JEOMETRI BASE WELDMENT FRONT - 18
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<b>DRAWN BY:</b> Noe F   04/16/24	<b>SHEET 1 OF 1</b>
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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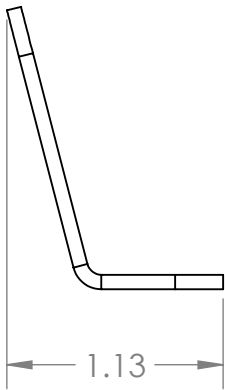
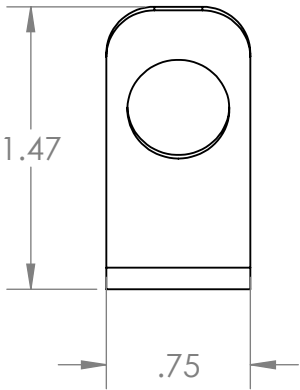
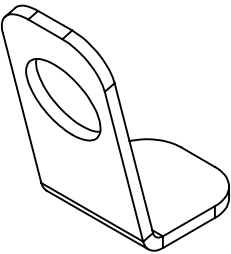
<b>PART #</b> JEOM-055-002	<b>MATERIAL</b> SM_A36_0.1345T
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<b>DESCRIPTION :</b> JEOMETRI BASE WELDMENT BASEPLATE - 18
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<b>DRAWN BY:</b> Noe F   04/16/23	<b>SHEET 1 OF 1</b>
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



DIMENSIONS ARE IN INCHES, UNLESS SPECIFIED OTHERWISE



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<b>PART #</b>	<b>MATERIAL</b>
JEOM-056-000	SM_A36_0.075T

<b>DESCRIPTION :</b>
JEOMETRI SEAT WELDMENT END FLANGE

<b>DRAWN BY:</b> Noe F   04/16/24	<b>SHEET 1 OF 1</b>
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