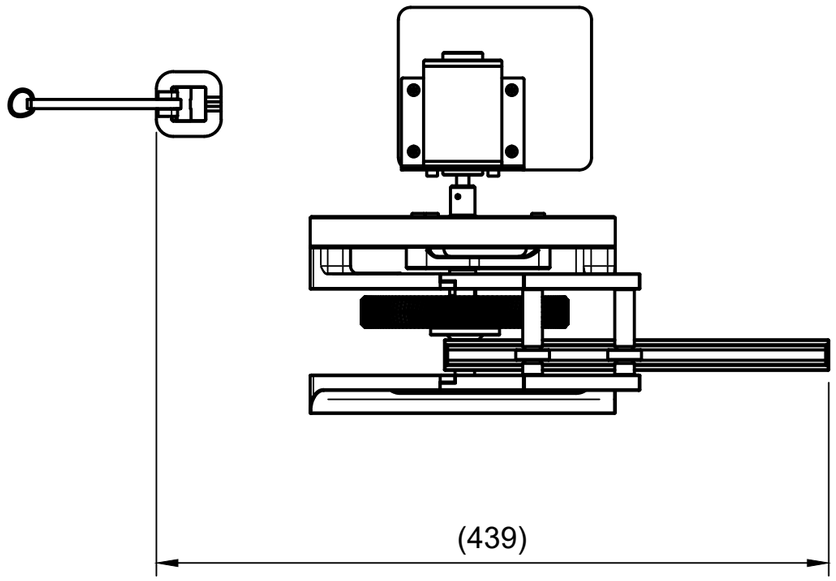
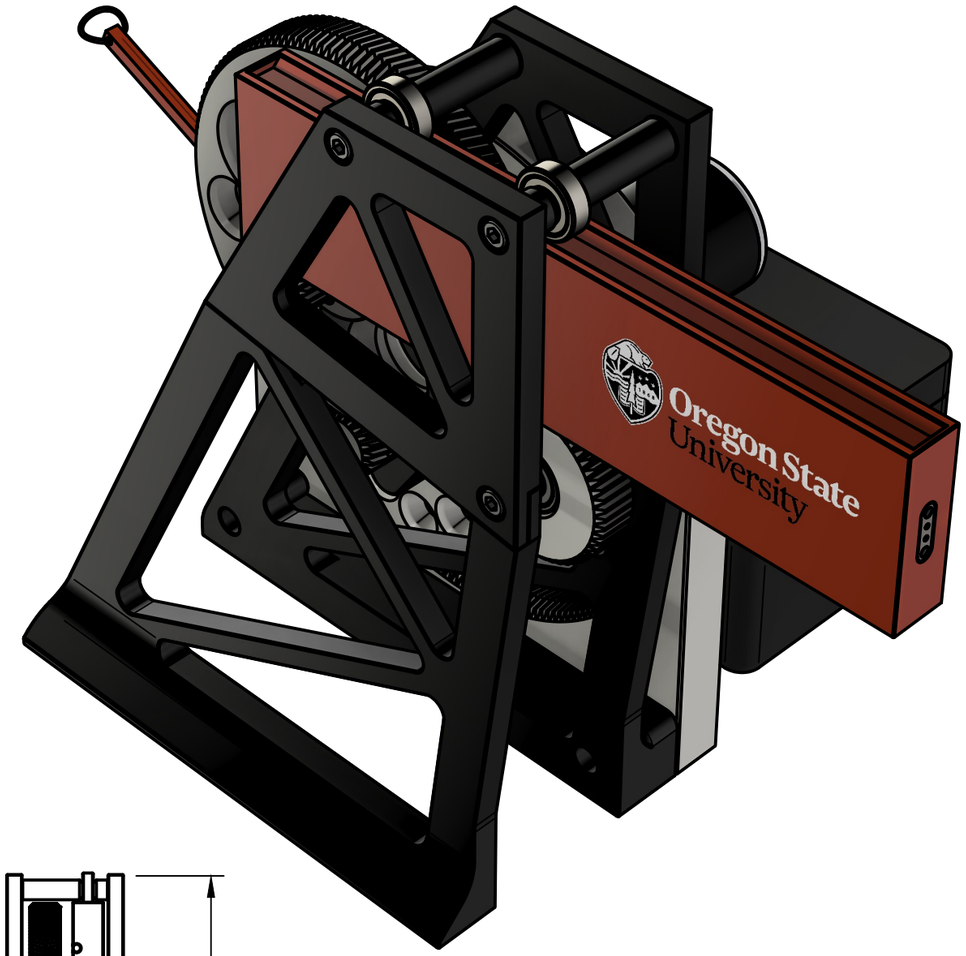
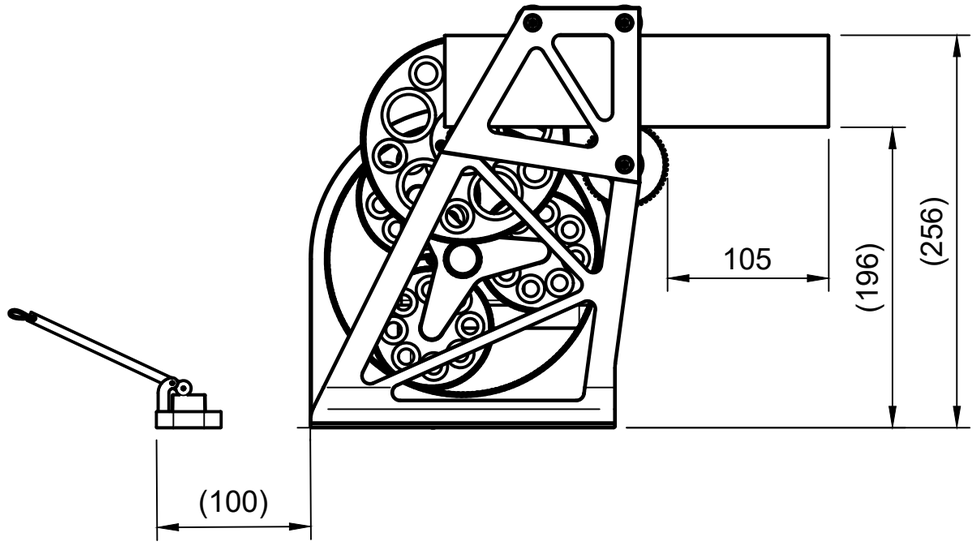
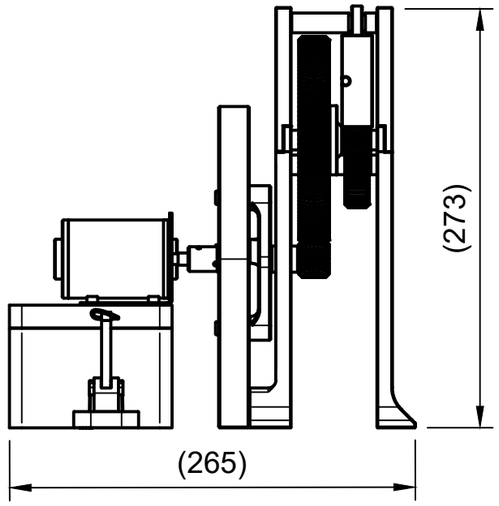








UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
DIMENSIONS ARE FOR REFERENCE ONLY

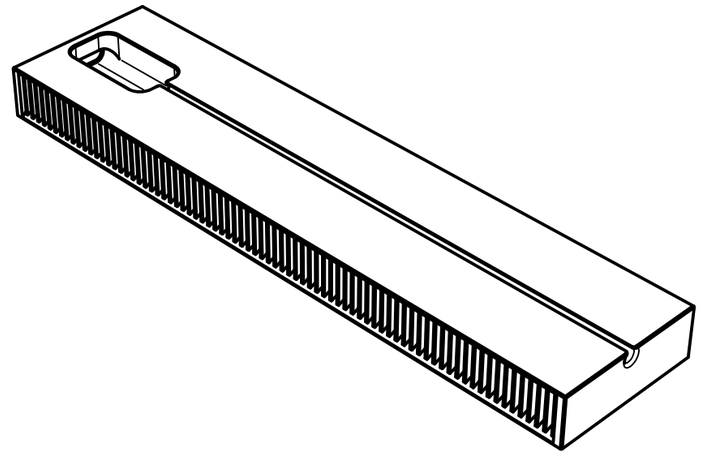
EVAN HALIBURTON

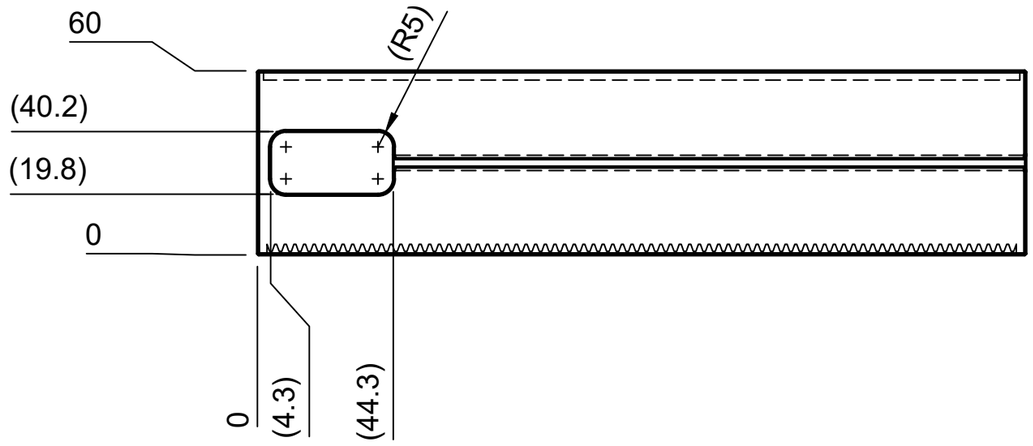
TITLE

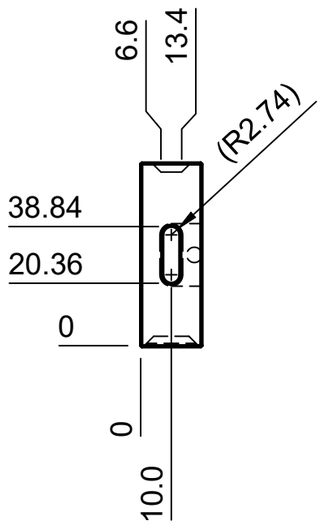
LINEAR ELECTRICAL POWER DELIVERER

SIZE	DRAWING NO.	REV
A3	ME382_043_001	C
SCALE 1:1		SHEET 1/1

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: PLA
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 4
- DEBURR ALL EDGES







GEAR DATA	
	RACK
MODULE	1
TYPE	SPUR
TOOTH COUNT	77
PRESSURE ANGLE	20°

UNLESS OTHERWISE SPECIFIED

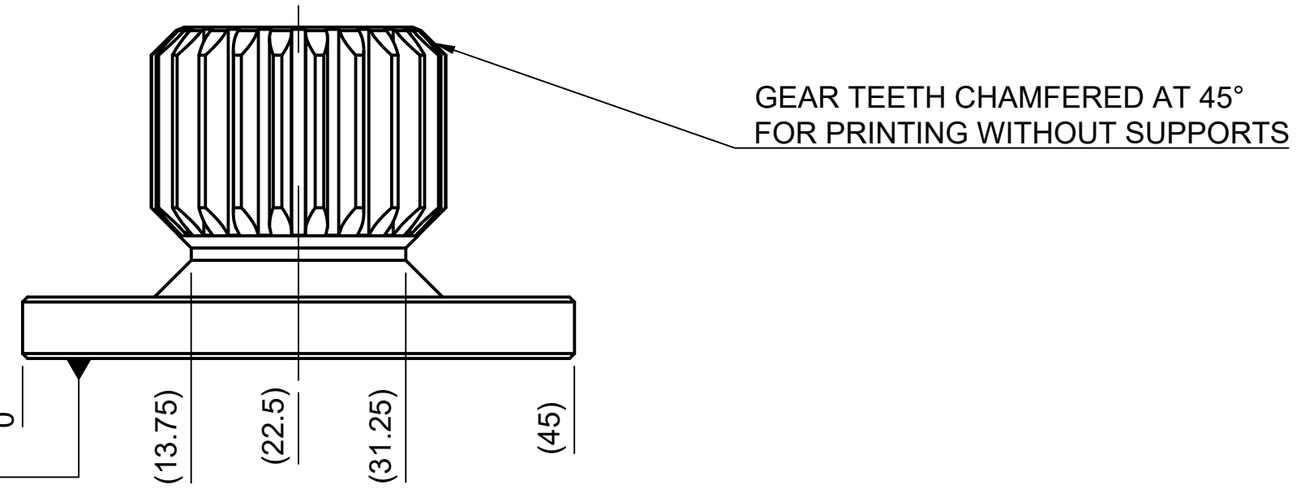
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

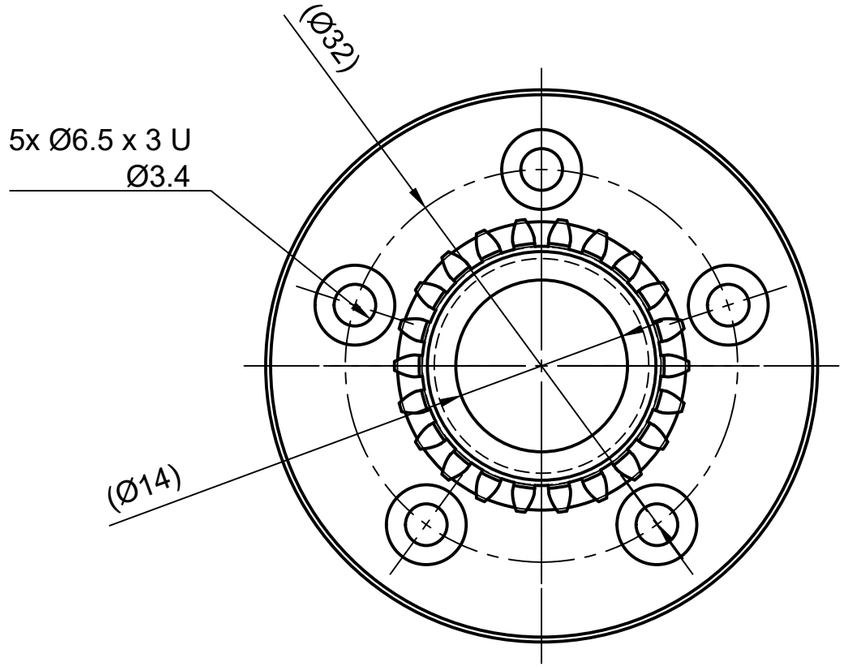
EVAN HALIBURTON

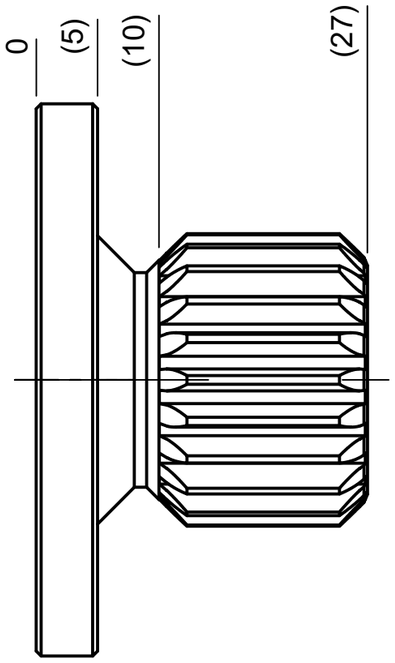
TITLE
OUTPUT CONNECTION BAR

SIZE	DRAWING NO.	REV
A3	ME382_043_002	B
SCALE 1:2		SHEET 1/1

- PART IS TO BE 3D PRINTED ONLY
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.12MM
- WALLS: 4
- DEBUR ALL EDGES







GEAR DATA	
	OUTPUT GEAR
MODULE	1
TYPE	SPUR
TOOTH COUNT	22
PRESSURE ANGLE	20°

UNLESS OTHERWISE SPECIFIED

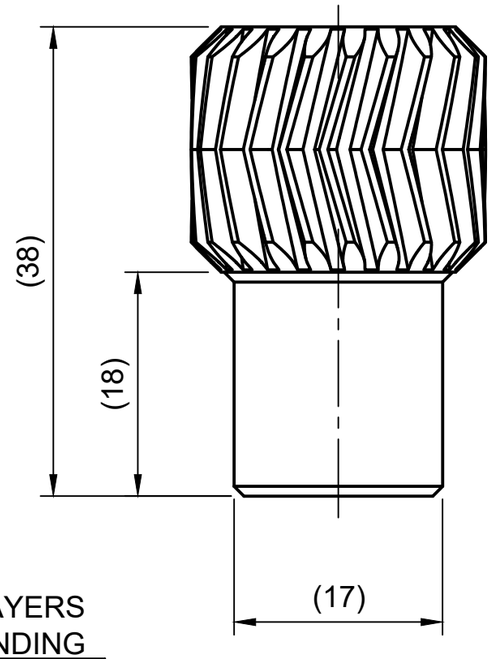
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

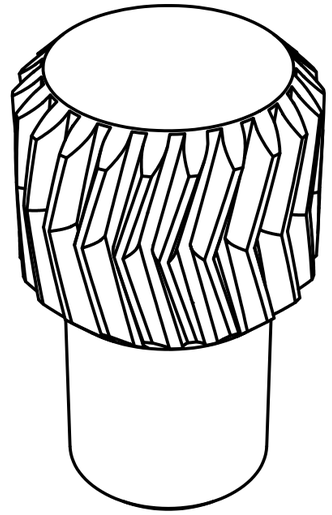
EVAN HALIBURTON

TITLE
OUTPUT GEAR

SIZE	DRAWING NO.	REV
A3	ME382_043_003	B
SCALE 2:1		SHEET 1/1

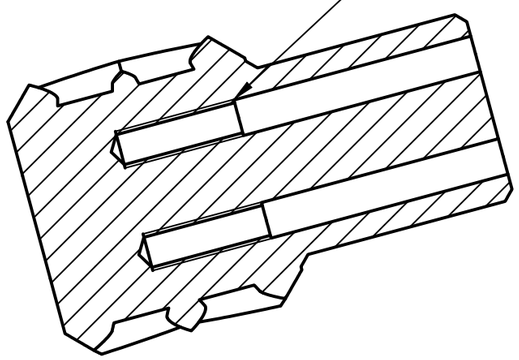
- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.12MM
- WALLS: 4
- DEBURR ALL EDGES



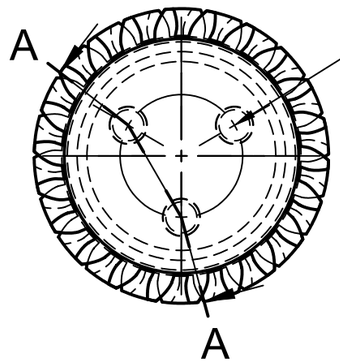


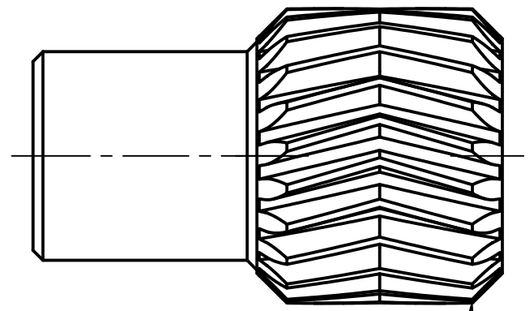
LONG SCREWS RUN THROUGH LAYERS
TO STIFFEN PART IN TORSION AND BENDING

A-A (2:1)



3x Ø3 x 20 U
M3x0.5 6H x 30/30





GEAR TEETH CHAMFERED AT 45°
FOR SIMPLIFIED FIRST LAYER
AND DIMENSIONAL ACCURACY

GEAR DATA	
	PINION GEAR
MODULE	1
TYPE	DOUBLE HELICAL
HELICAL SYSTEM	RADIAL
TOOTH COUNT	22
PRESSURE ANGLE	20°
HELICAL ANGLE	15°

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

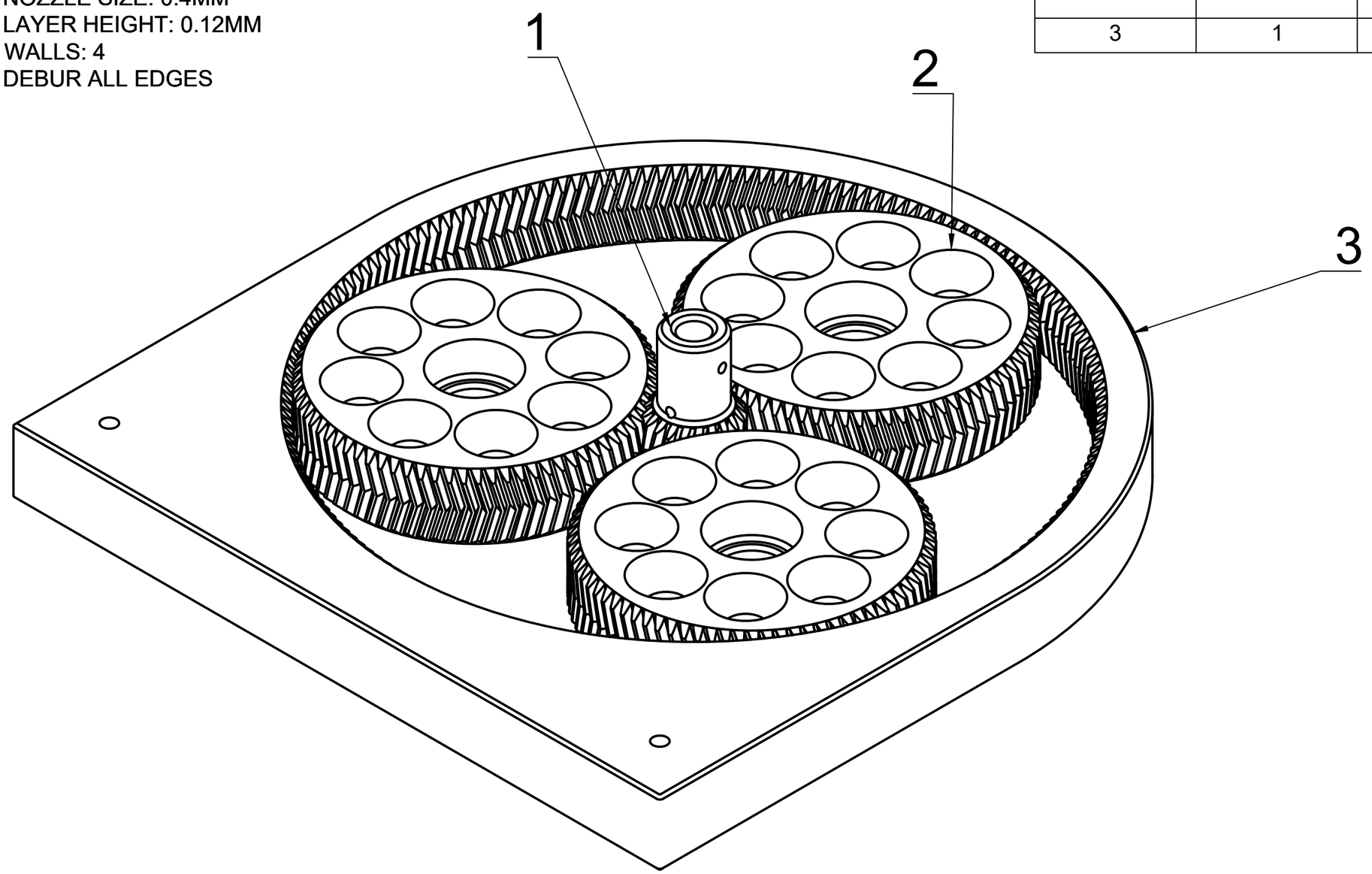
EVAN HALIBURTON

TITLE
PINION GEAR

SIZE	DRAWING NO.	REV
A3	ME382_043_004	C
SCALE 2:1		SHEET 1/1

- ASSEMBLY IS TO BE 3D PRINTED IN PLACE
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.12MM
- WALLS: 4
- DEBUR ALL EDGES

PARTS LIST			
ITEM	QTY	PART	MATERIAL
1	1	SUN GEAR	NYLON 6
2	3	PLANET GEAR	NYLON 6
3	1	RING GEAR	NYLON 6



GEAR DATA			
	SUN GEAR	**PLANET GEAR**	**RING GEAR**
MODULE	1	1	1
TYPE	DOUBLE HELICAL	DOUBLE HELICAL	DOUBLE HELICAL
HELICAL SYSTEM	RADIAL	RADIAL	RADIAL
TOOTH COUNT	21	78	177
PRESSURE ANGLE	20°	20°	20°
HELICAL ANGLE	15°	15°	15°

UNLESS OTHERWISE SPECIFIED

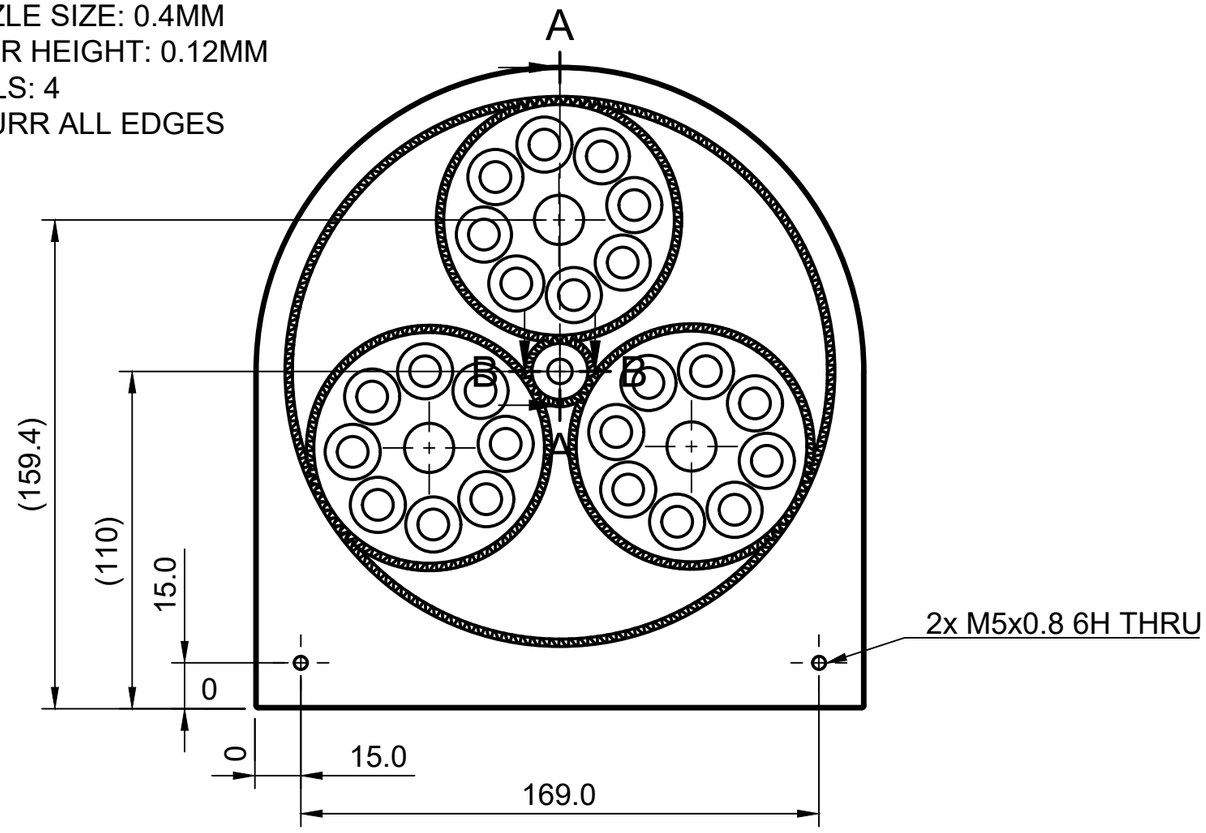
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

EVAN HALIBURTON

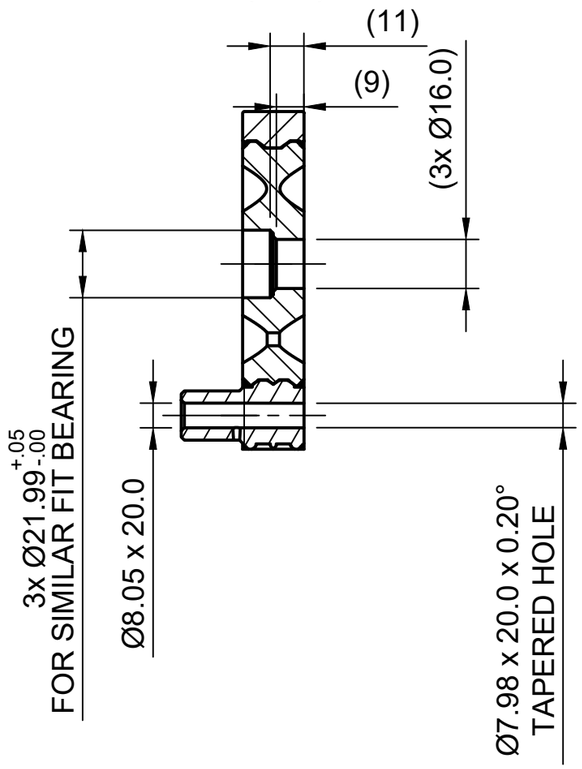
TITLE
9.4:1 PLANETARY GEAR SET

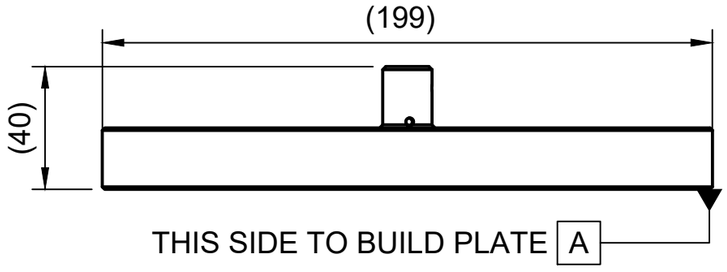
SIZE	DRAWING NO.	REV
A3	ME382_043_005	B
SCALE 1:1		SHEET 1/2

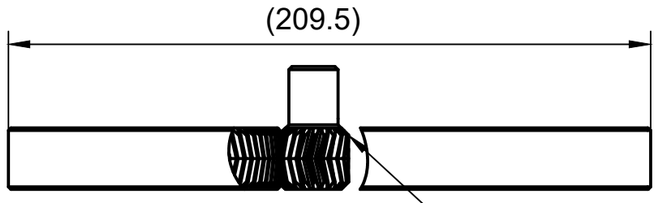
- ASSEMBLY IS TO BE 3D PRINTED IN PLACE
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.12MM
- WALLS: 4
- DEBURR ALL EDGES



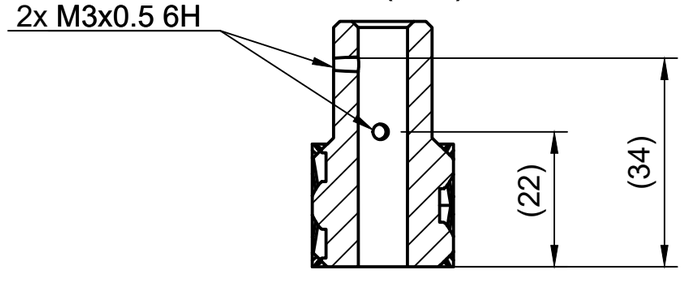
A-A (1:2)





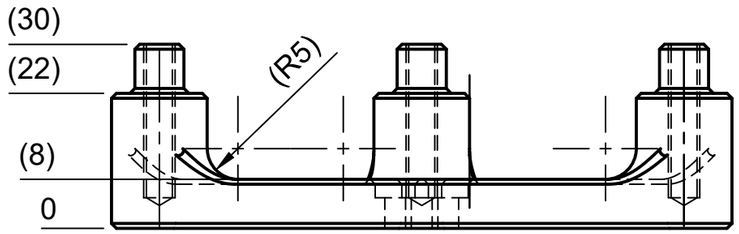


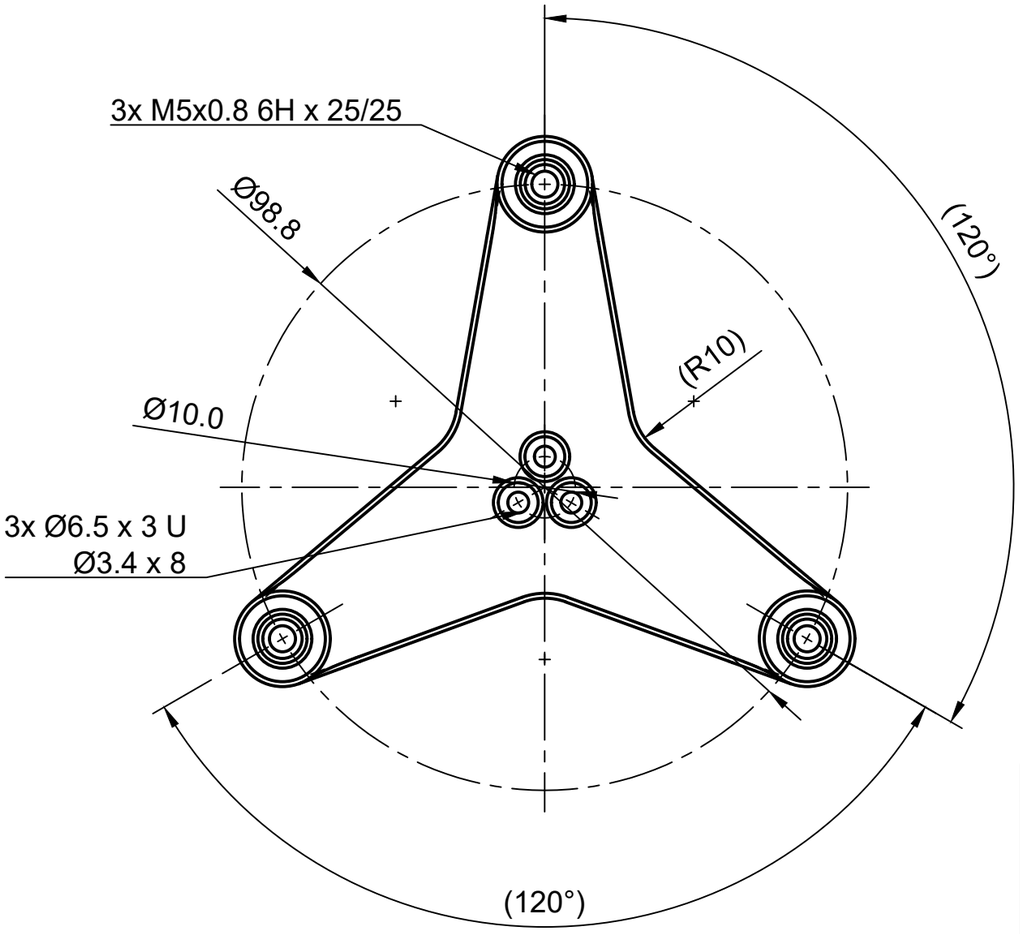
B-B (1:1)

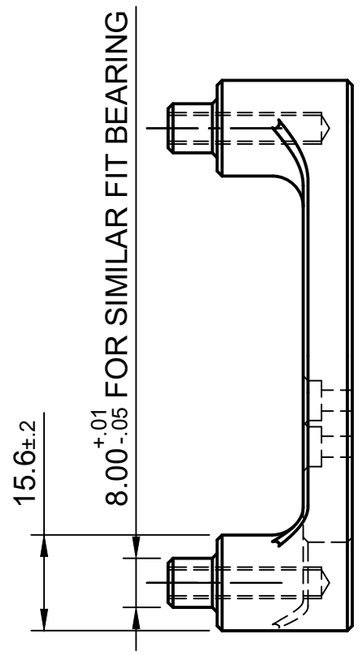


UNLESS OTHERWISE SPECIFIED	EVAN HALIBURTON		
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.2 ONE PLACE DECIMAL: ±0.1 TWO PLACE DECIMAL: ±0.05	TITLE PLANETARY GEAR SET		
	SIZE A3	DRAWING NO. ME382_043_006	REV C
	SCALE 1:2		SHEET 2/2

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 4
- DEBURR ALL EDGES

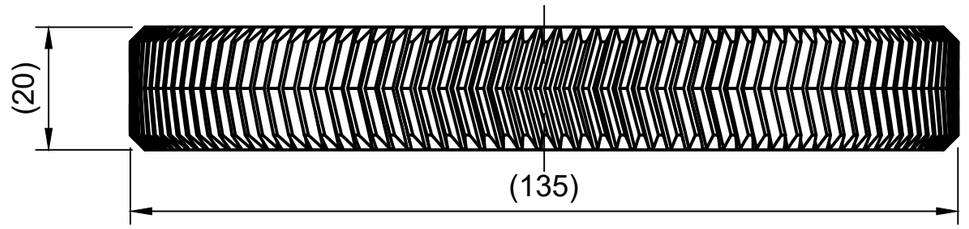




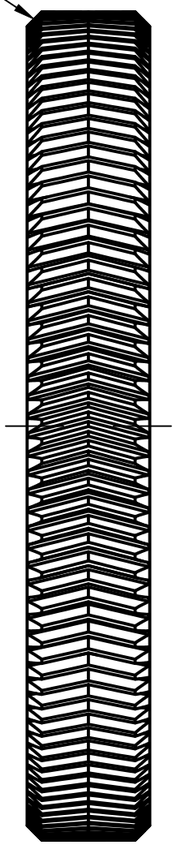


UNLESS OTHERWISE SPECIFIED	EVAN HALIBURTON		
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.2 ONE PLACE DECIMAL: ±0.1 TWO PLACE DECIMAL: ±0.05	TITLE PLANET CARRIER		
	SIZE A3	DRAWING NO. ME382_043_007	REV B
	SCALE 1:1		SHEET 1/1

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: NYLON PA-6
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.12MM
- WALLS: 4
- DEBURR ALL EDGES

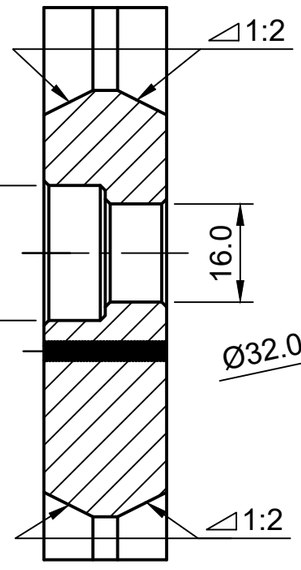


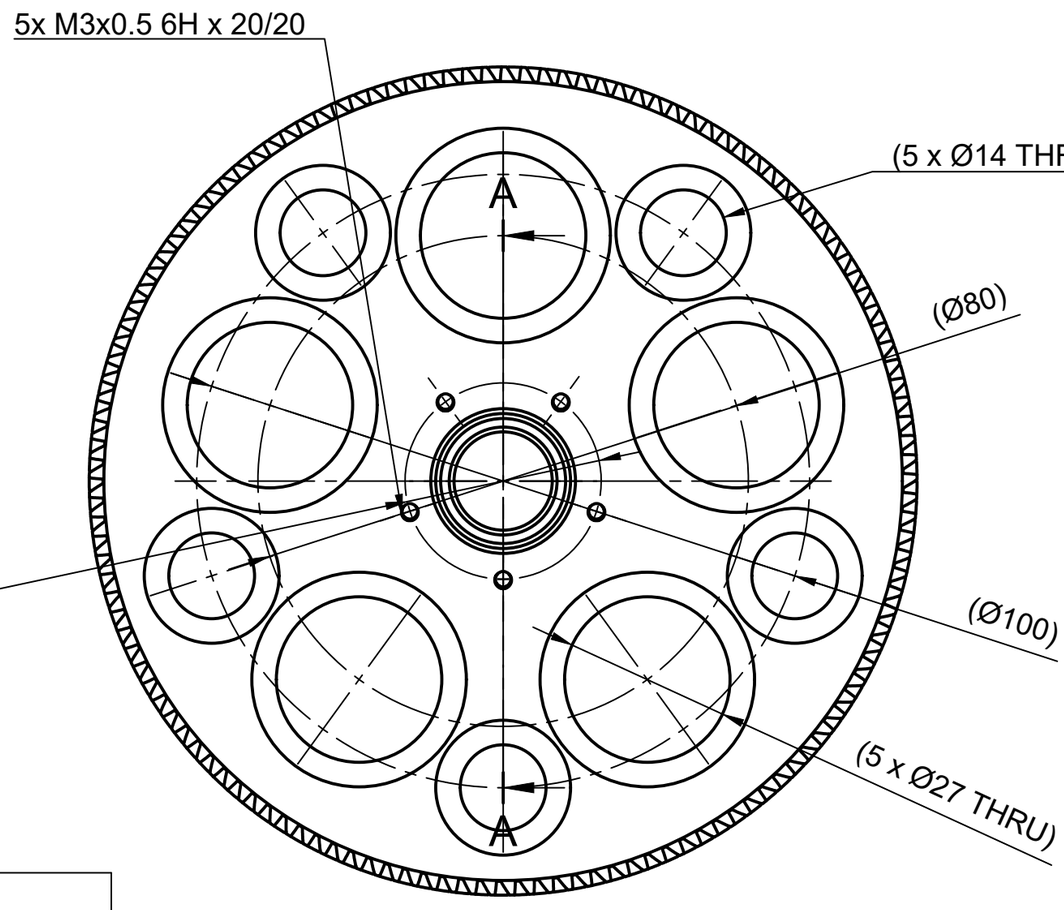
GEAR TEETH CHAMFERED AT 45°
FOR SIMPLIFIED FIRST LAYER
AND DIMENSIONAL ACCURACY



$22.00^{+.05}_{-.01}$ FOR SIMILAR FIT BEARING

A-A (1:1)





GEAR DATA	
	SECONDARY REDUCTION INPUT GEAR
MODULE	1
TYPE	DOUBLE HELICAL
HELICAL SYSTEM	RADIAL
TOOTH COUNT	133
PRESSURE ANGLE	20°
HELICAL ANGLE	15°

UNLESS OTHERWISE SPECIFIED

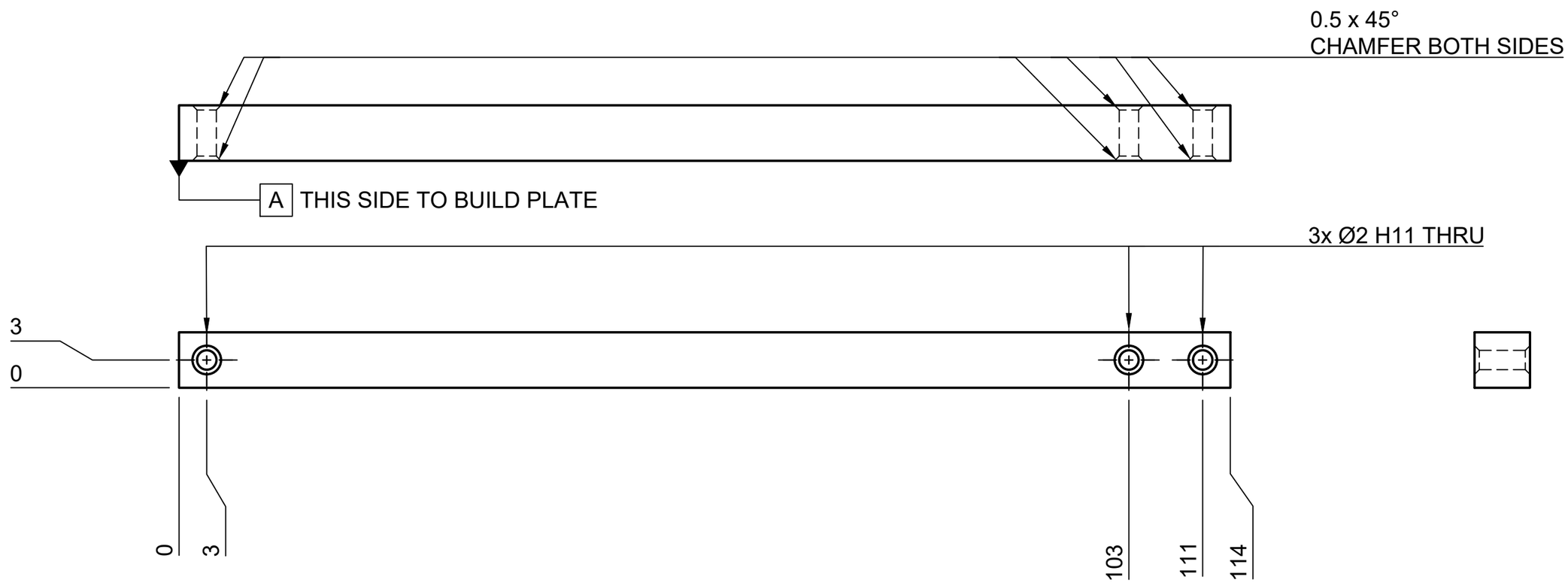
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

EVAN HALIBURTON

TITLE
SECONDARY REDUCTION INPUT GEAR

SIZE	DRAWING NO.	REV
A3	ME382_043_008	C
SCALE 1:1		SHEET 1/1

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: ABS
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 100 (PART SHOULD BE SOLID)
- DEBURR ALL EDGES



UNLESS OTHERWISE SPECIFIED

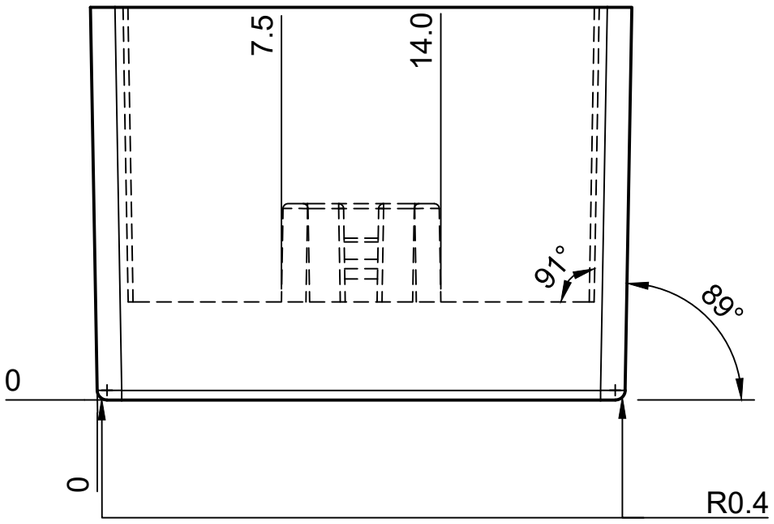
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.1
ONE PLACE DECIMAL: ±0.05
TWO PLACE DECIMAL: ±0.025

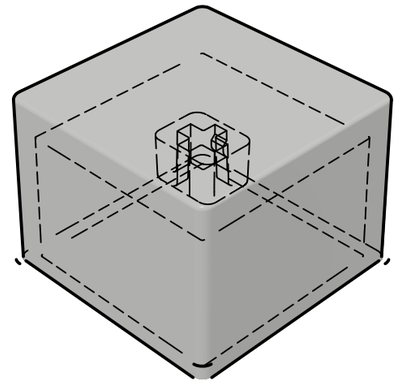
EVAN HALIBURTON

TITLE
LEVER ARM

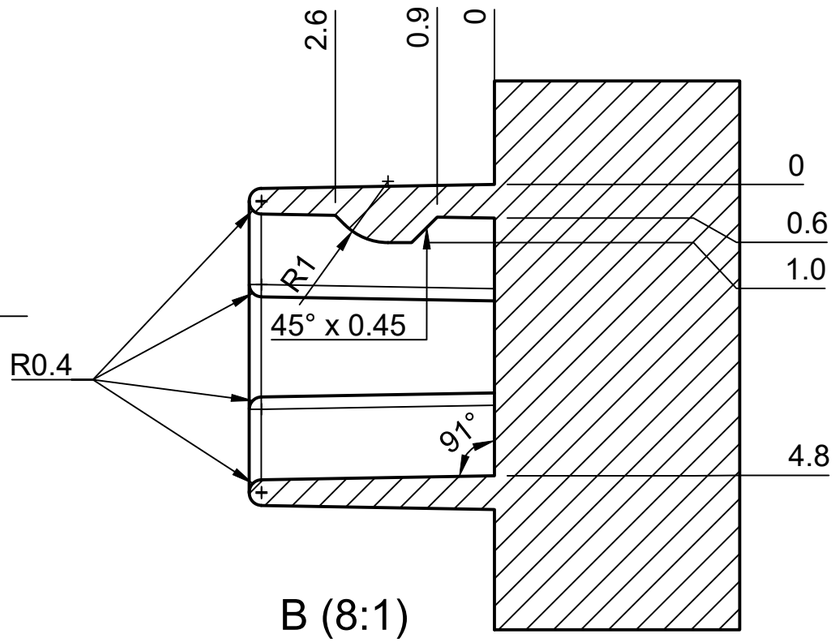
SIZE	DRAWING NO.	REV
A3	ME382_043_009	B
SCALE 2:1		SHEET 1/1

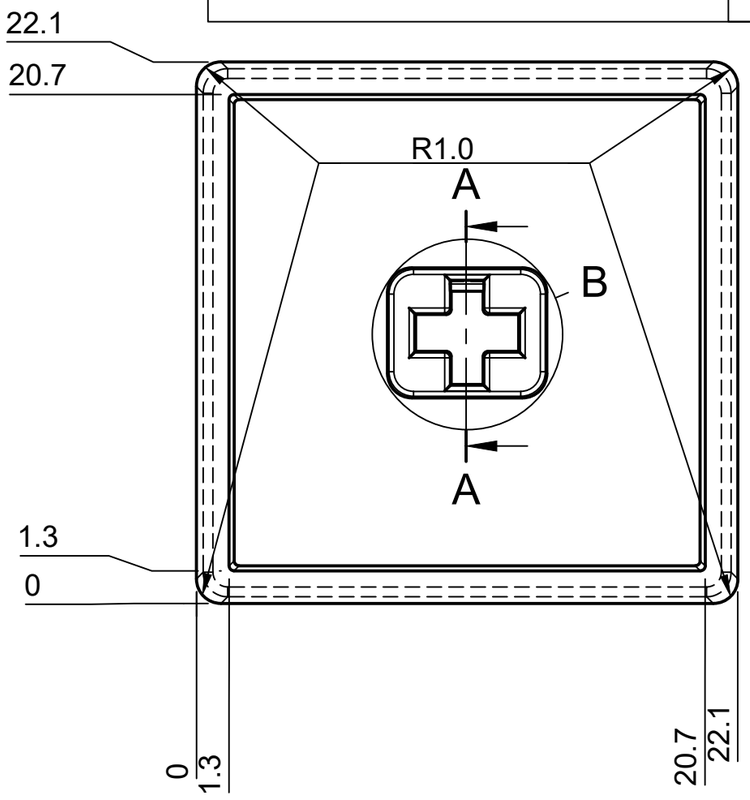
PART TO BE INJECTION MOLDED IN ABS PLASTIC
PROTOTYPE MAY BE SLA PRINTED IN ENGINEERING RESIN

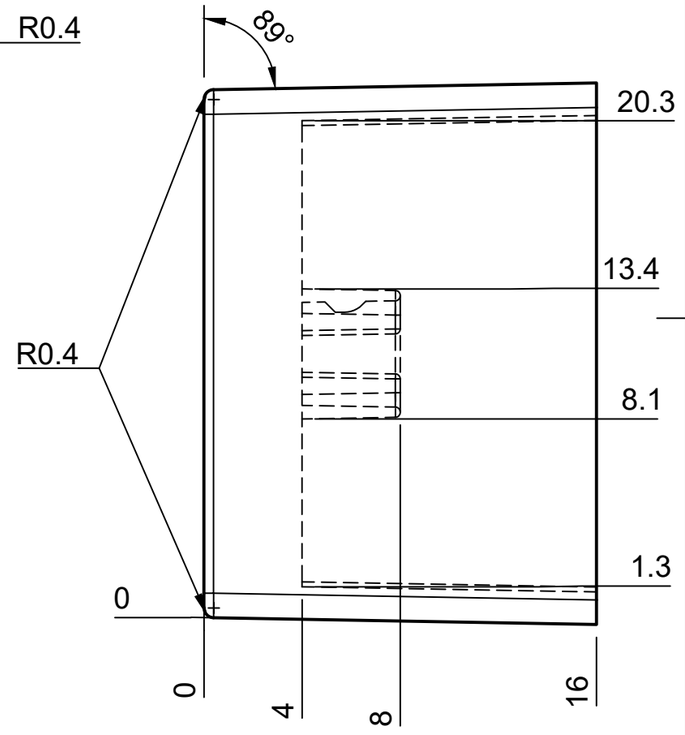




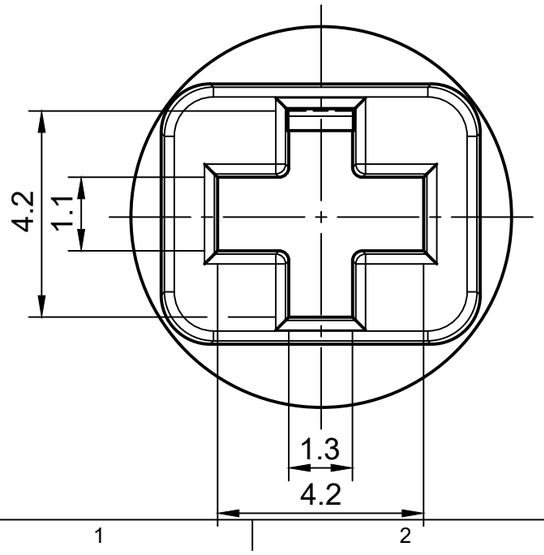
A-A (10:1)



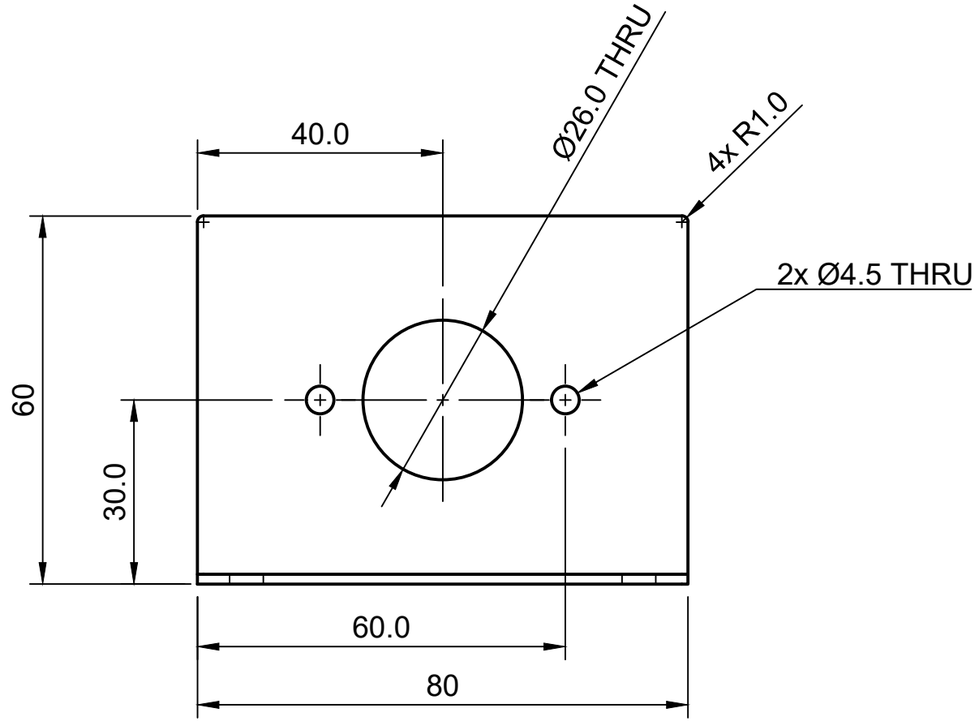


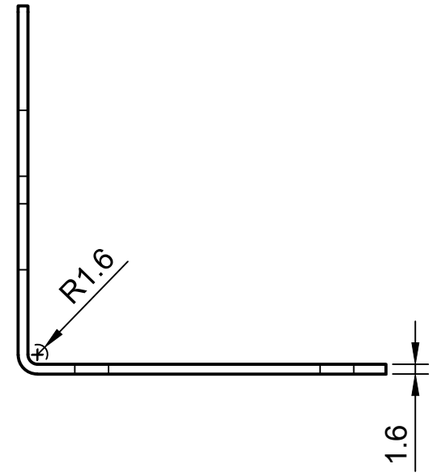


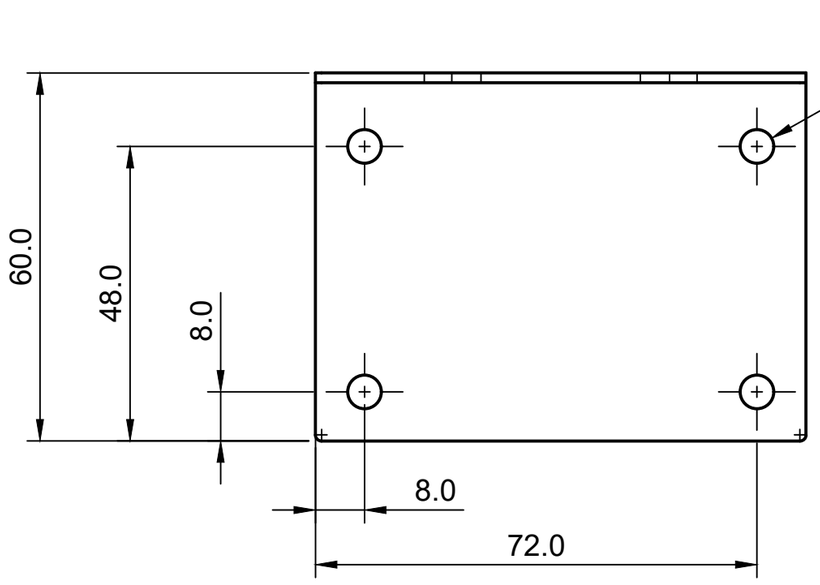
B (8:1)

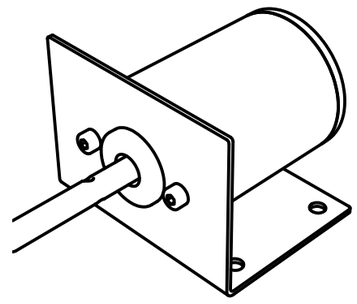


UNLESS OTHERWISE SPECIFIED	EVAN HALIBURTON		
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.1 ONE PLACE DECIMAL: ±0.05 TWO PLACE DECIMAL: ±0.025 ALL WALLS 1° DRAFT ANGLE	TITLE SWITCH PRESSURE PLATE		
	SIZE A3	DRAWING NO. ME382_043_010	REV B
	SCALE 2:1		SHEET 1/1

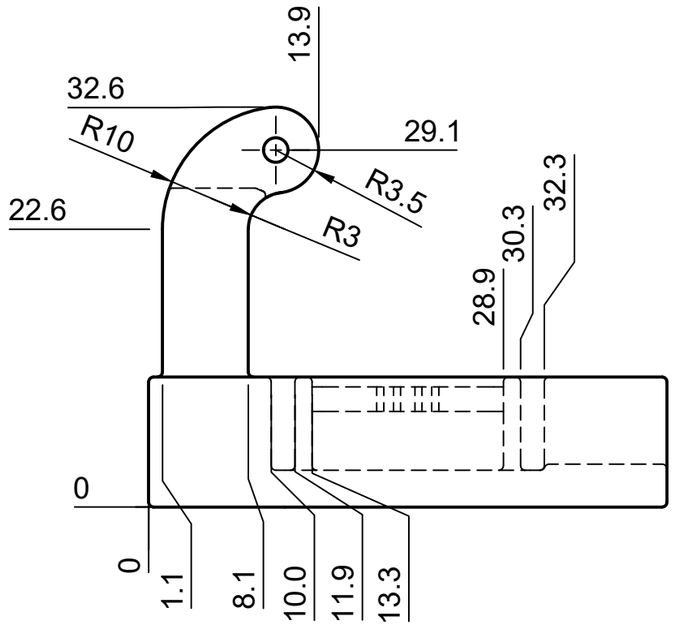


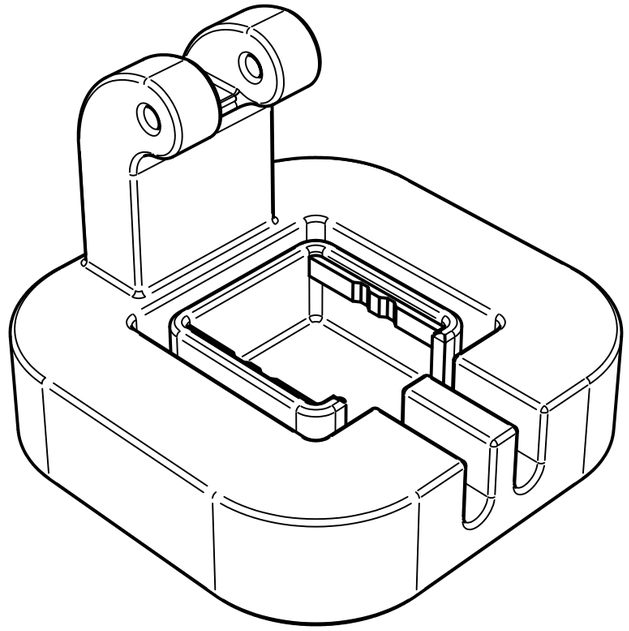




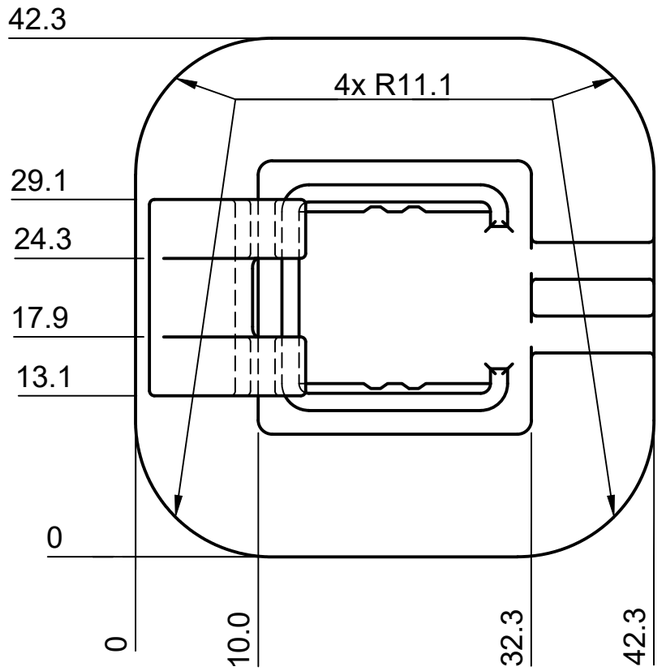


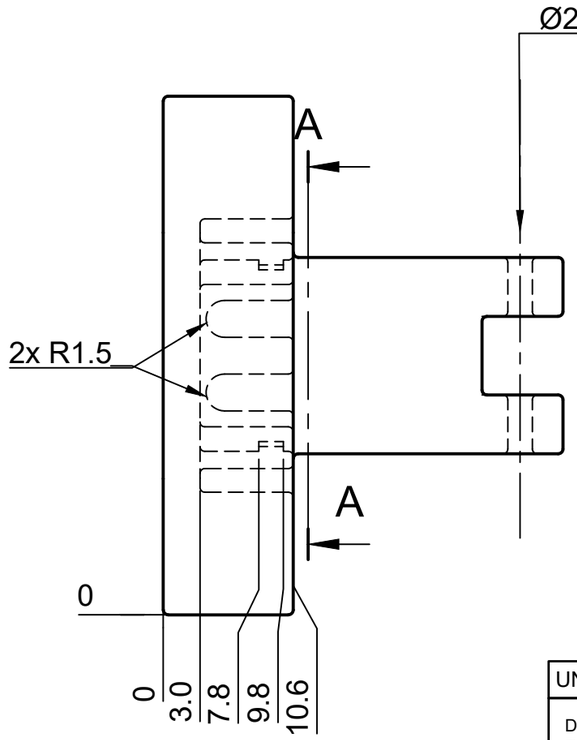
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.1 ONE PLACE DECIMAL: ±0.05 TWO PLACE DECIMAL: ±0.025	EVAN HALIBURTON		
	TITLE MOTOR MOUNT BRACKET		
	SIZE A3	DRAWING NO. ME382_043_011	REV B
MATERIAL: 0.06" 6061-T6 ALUMINUM SHEET	SCALE 1:1		SHEET 1/1



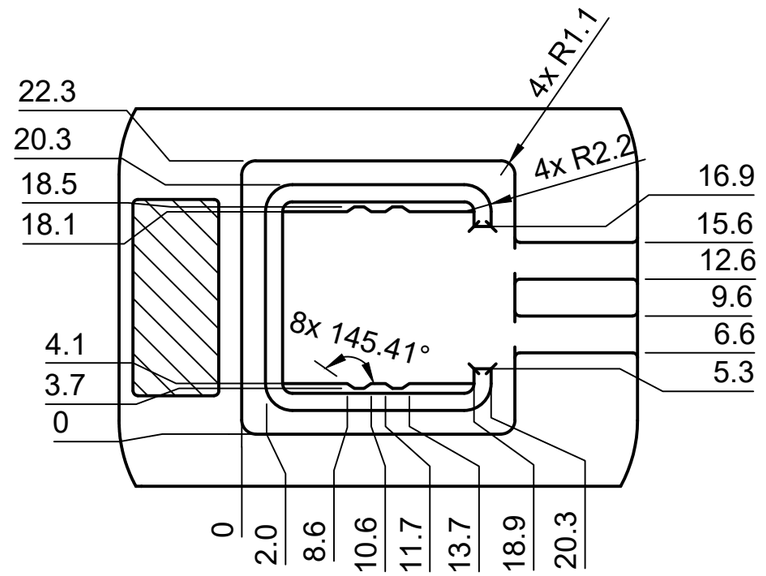


PART TO BE INVESTMENT CAST IN BRONZE
FROM 3D PRINTED MOLD

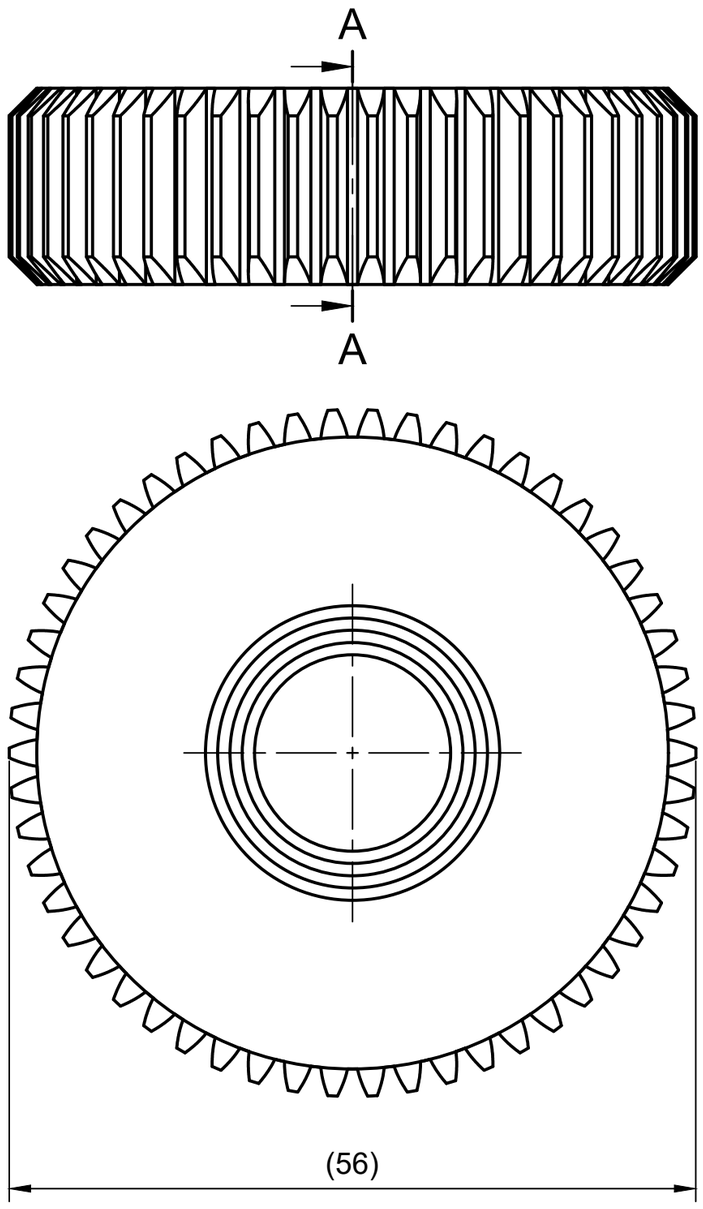


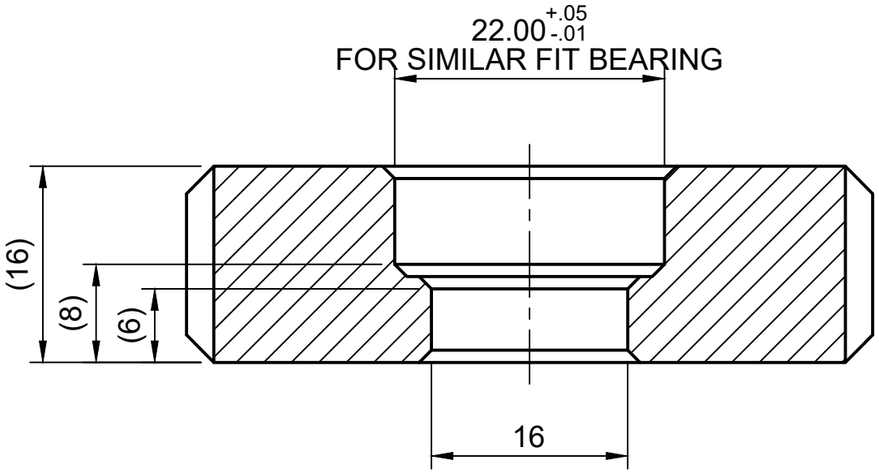


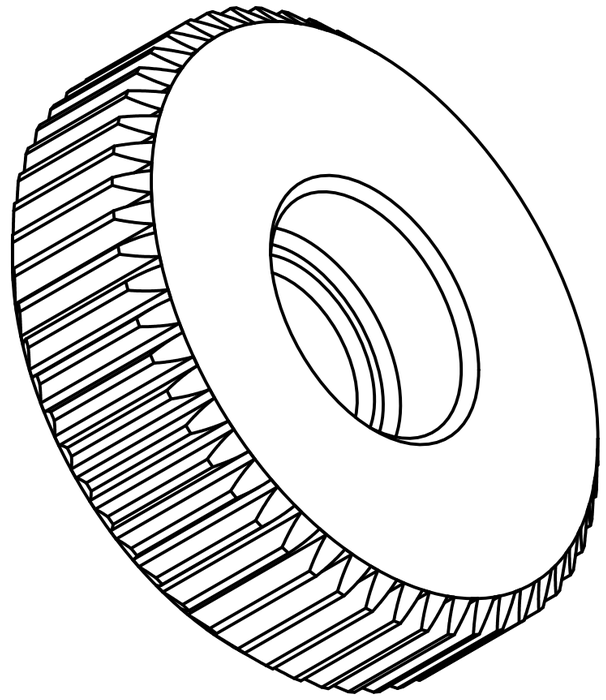
A-A (2:1)



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.1 ONE PLACE DECIMAL: ±0.05 TWO PLACE DECIMAL: ±0.025 ALL EDGE FILLETS 0.4	EVAN HALIBURTON
	TITLE LEVER-SWITCH WEIGHTED BASE
SIZE A3	DRAWING NO. ME382_043_012
REV B	
SCALE 2:1	SHEET 1/1







GEAR DATA	
	TOOTHED ROLLER
MODULE	1
TYPE	SPUR
TOOTH COUNT	54
PRESSURE ANGLE	20°

UNLESS OTHERWISE SPECIFIED

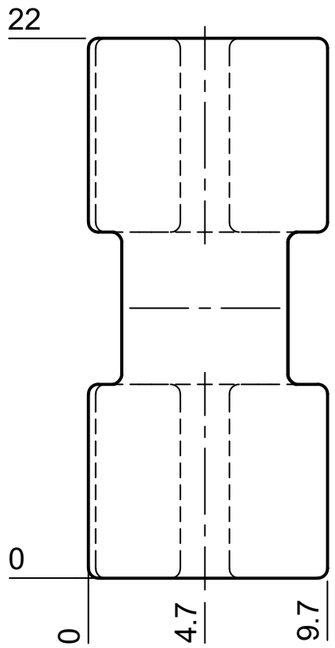
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

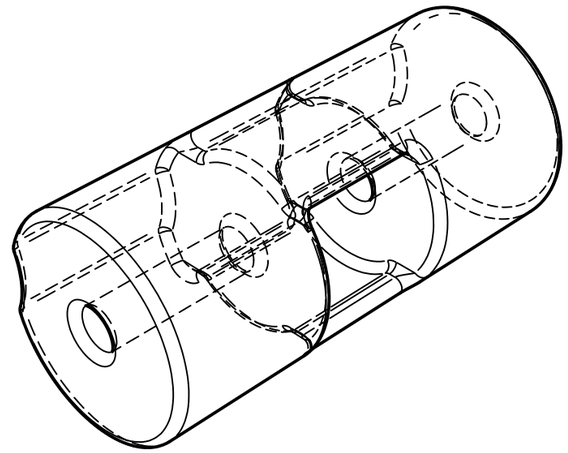
EVAN HALIBURTON

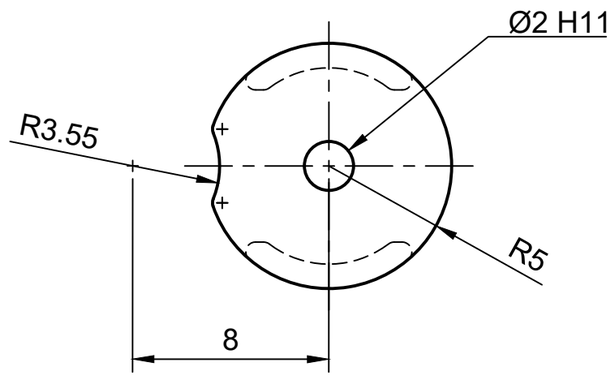
TITLE
TOOTHED ROLLER

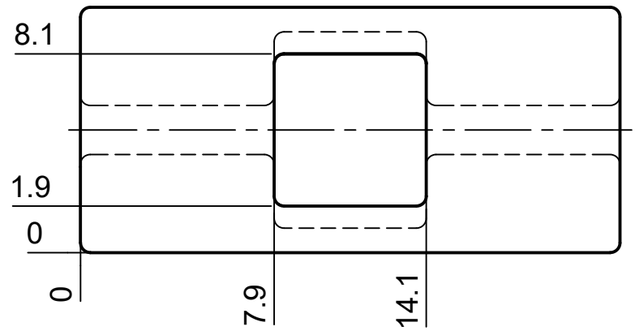
SIZE	DRAWING NO.	REV
A3	ME382_043_013	A
SCALE 2:1		SHEET 1/1

PART IS TO BE 3D PRINTED IN SINTERED BRONZE

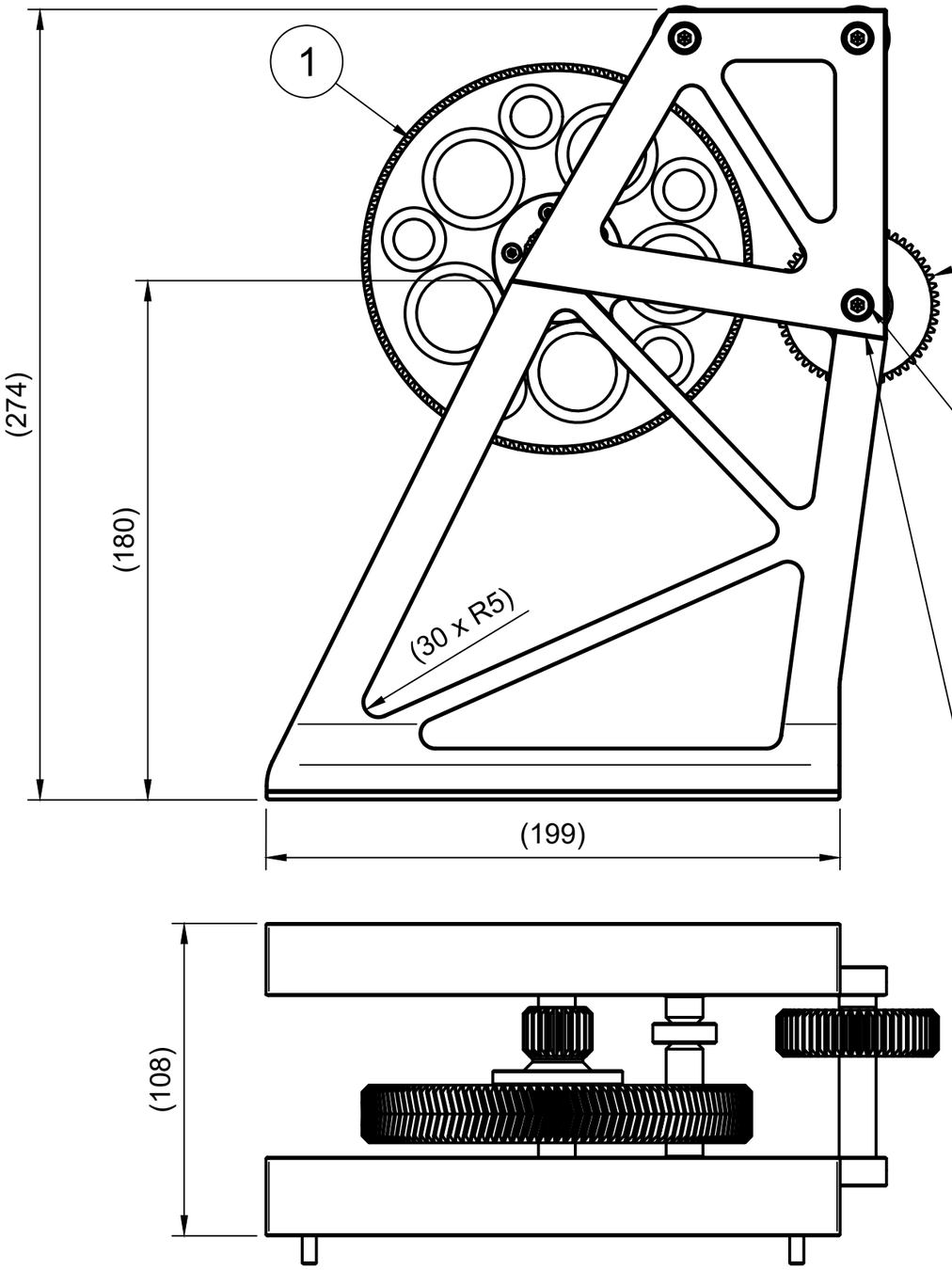


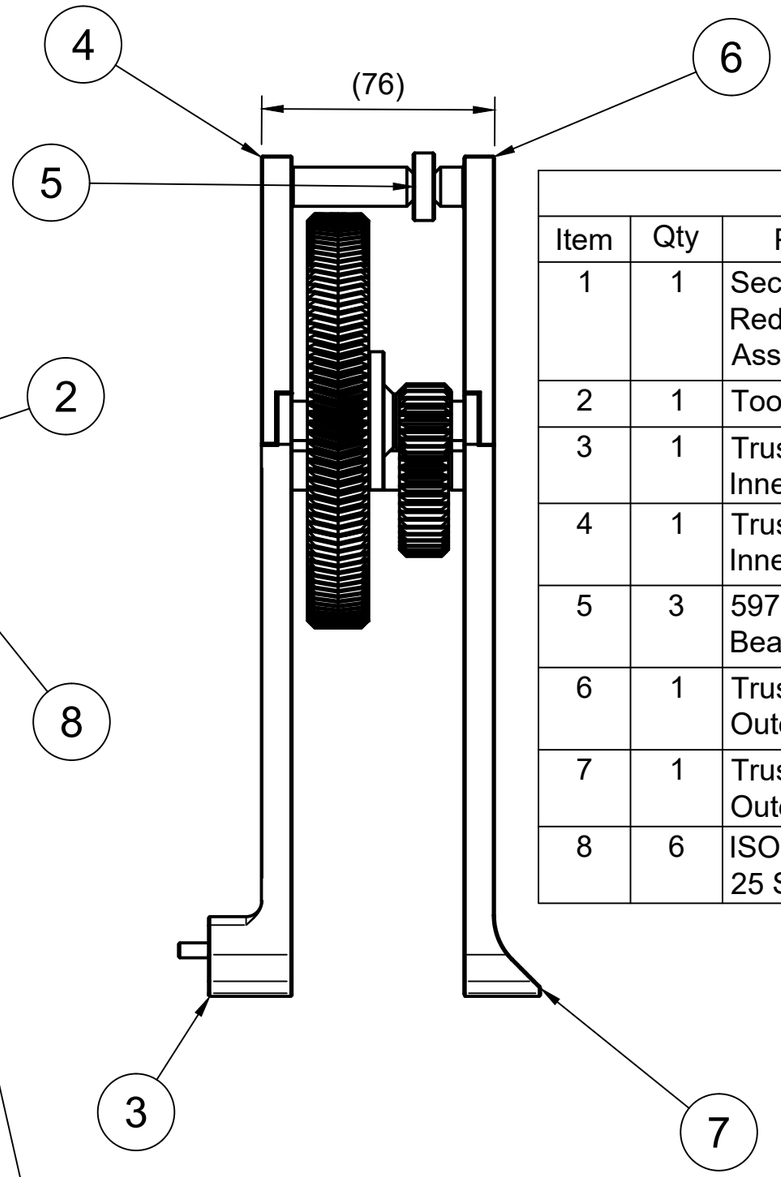






UNLESS OTHERWISE SPECIFIED	EVAN HALIBURTON		
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.1 ONE PLACE DECIMAL: ±0.05 TWO PLACE DECIMAL: ±0.025	TITLE LEVER COUNTERWEIGHT		
	SIZE A3	DRAWING NO. ME382_043_014	REV C
	SCALE 4:1		SHEET 1/1





Parts List			
Item	Qty	Part Number	Material
1	1	Secondary Reduction Gear Assembly	----
2	1	Toothed Roller	Nylon 6/6
3	1	Truss Structure Inner Lower	Nylon 6/6
4	1	Truss Structure Inner Upper	Nylon 6/6
5	3	5972K501_Ball Bearing	Steel
6	1	Truss Structure Outer Upper	Nylon 6/6
7	1	Truss Structure Outer Lower	Nylon 6/6
8	6	ISO 4762 - M5 x 25 Steel 4.6 Plain	Steel 4.6, Plain

TRUSS IS SPLIT TO FIT IN 226 x 226 x 226 STANDARD BUILD ENVELOPE
EACH PIECE PRINTS FLAT ON PLATE WITHOUT SUPPORTS

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
DIMENSIONS ARE FOR REFERENCE ONLY

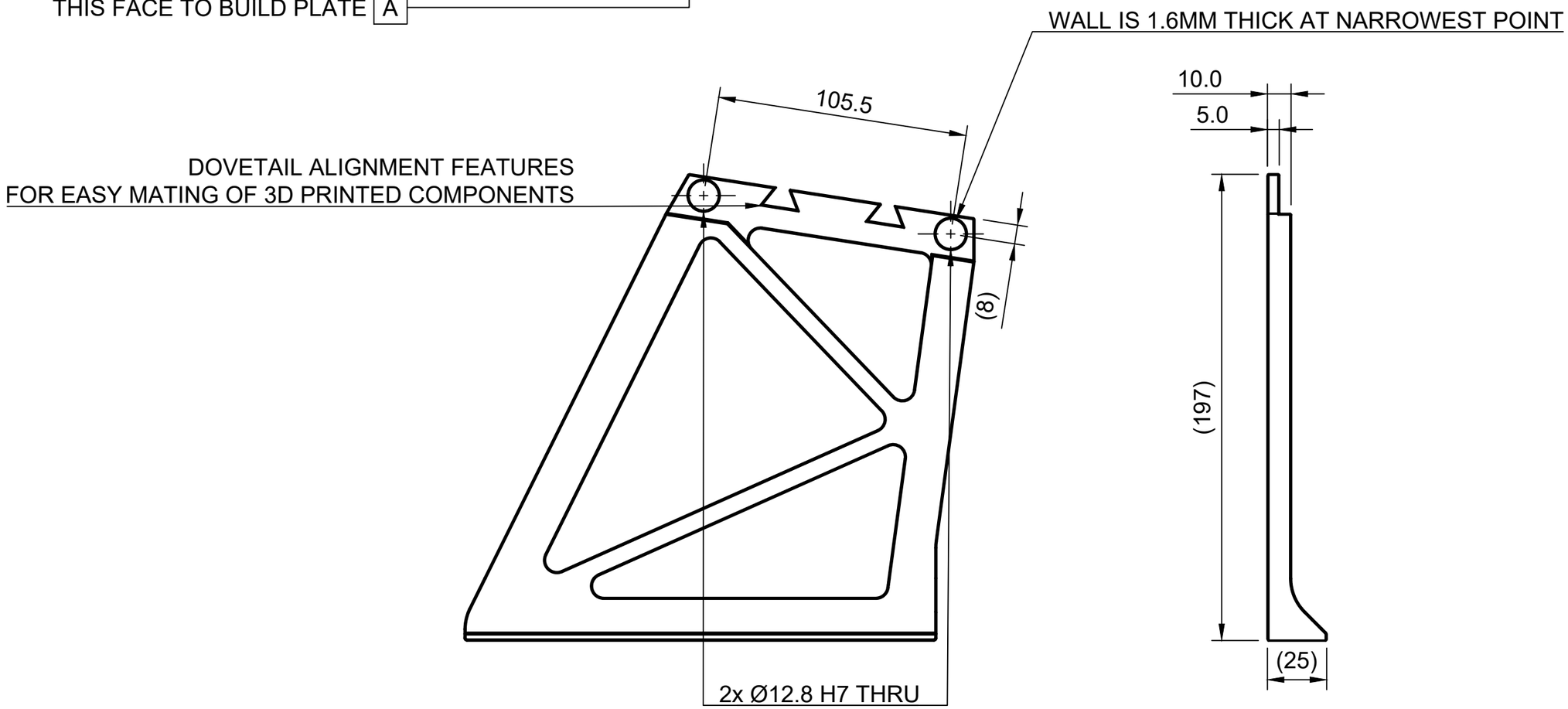
EVAN HALIBURTON

TITLE

TRUSS ASSEMBLY

SIZE	DRAWING NO.	REV
A3	ME382_043_015	A
SCALE 1:2		SHEET 1/5

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: PLA
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 3
- DEBURR ALL EDGES



UNLESS OTHERWISE SPECIFIED

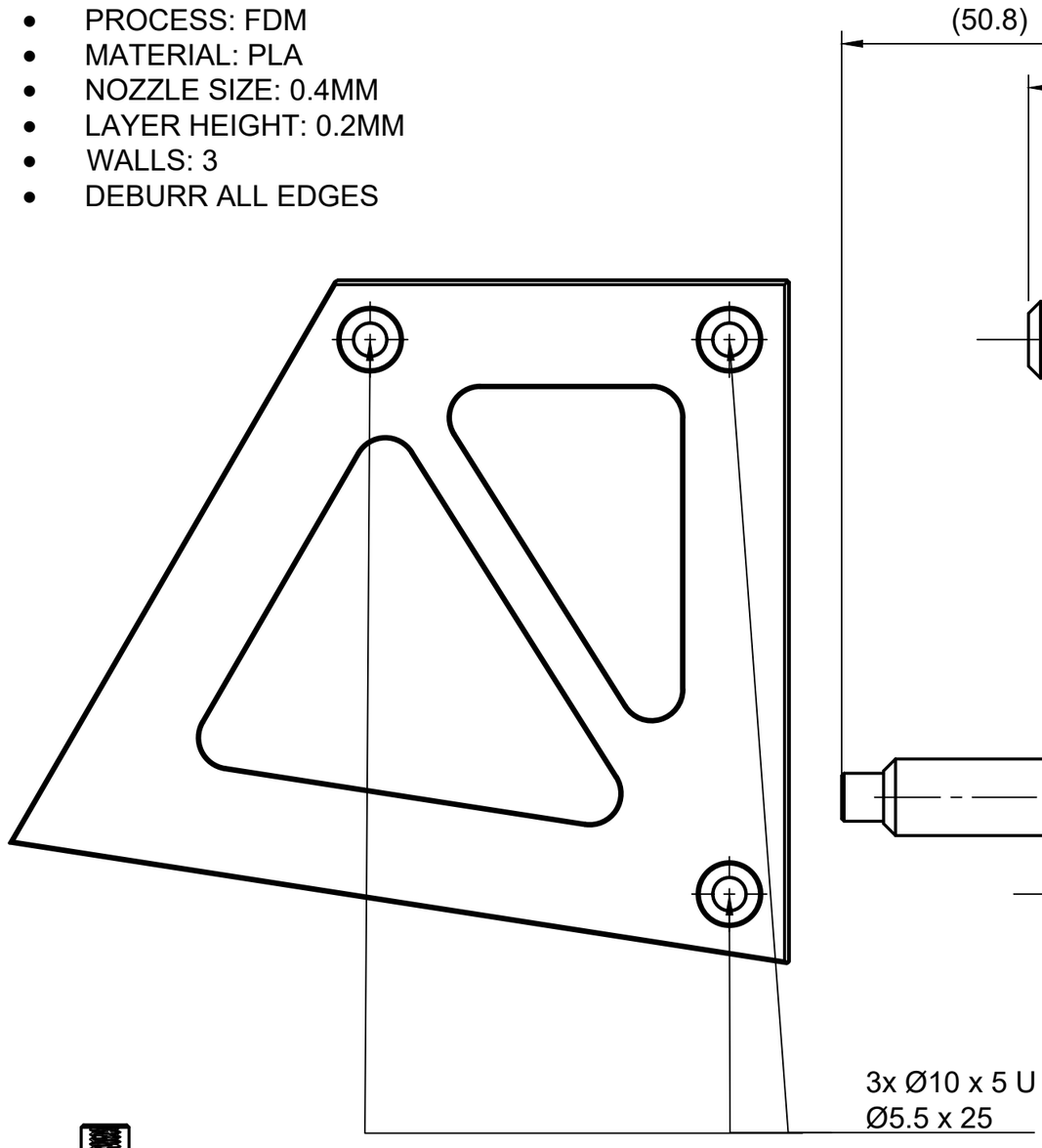
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

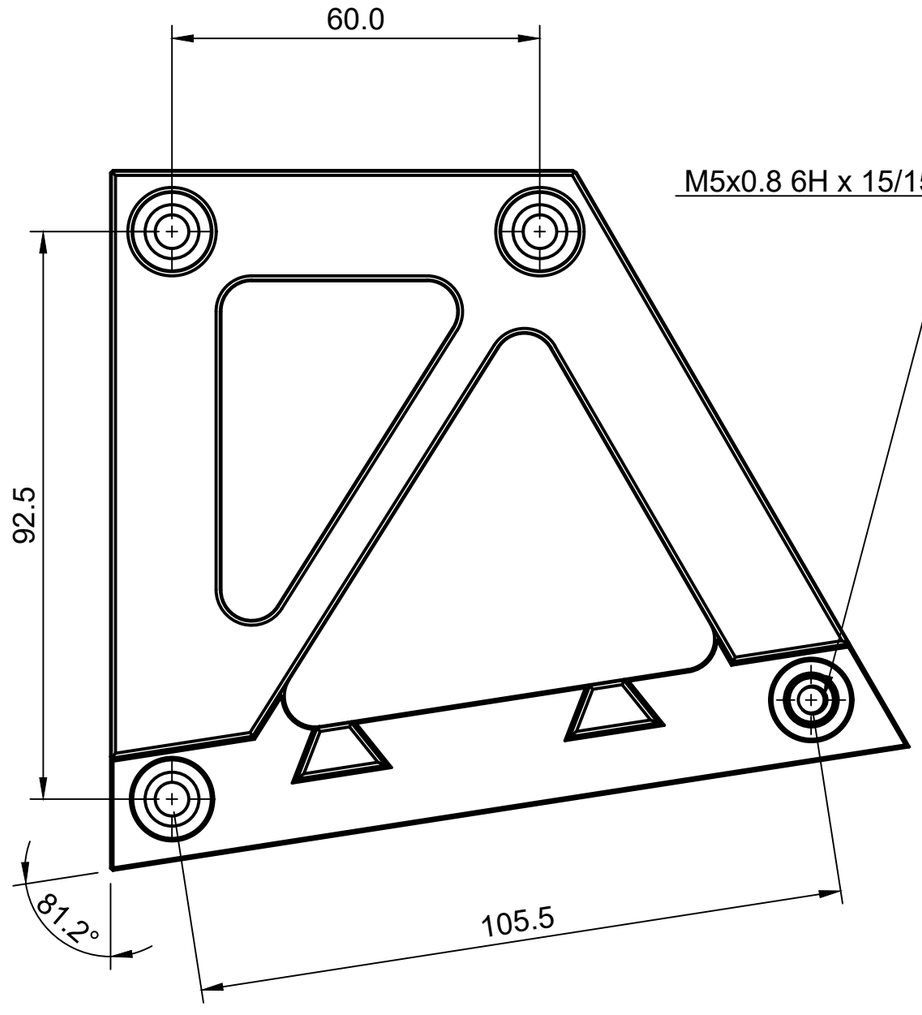
EVAN HALIBURTON

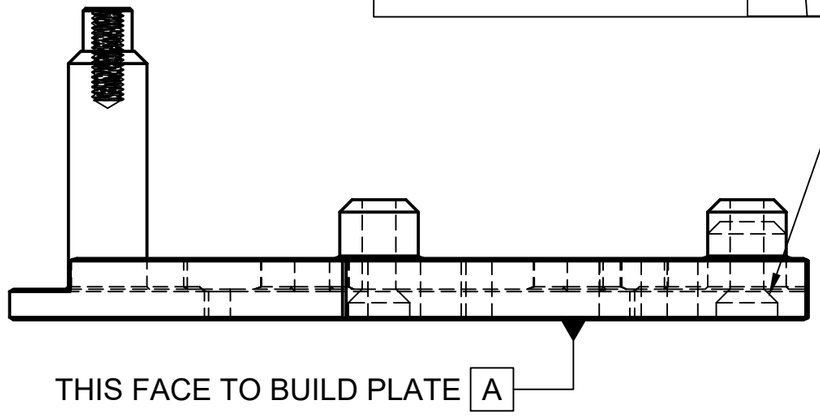
TITLE
TRUSS STRUCTURE OUTER LOWER

SIZE	DRAWING NO.	REV
A3	ME382_043_016	A
SCALE 1:2		SHEET 2/5

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: PLA
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 3
- DEBURR ALL EDGES



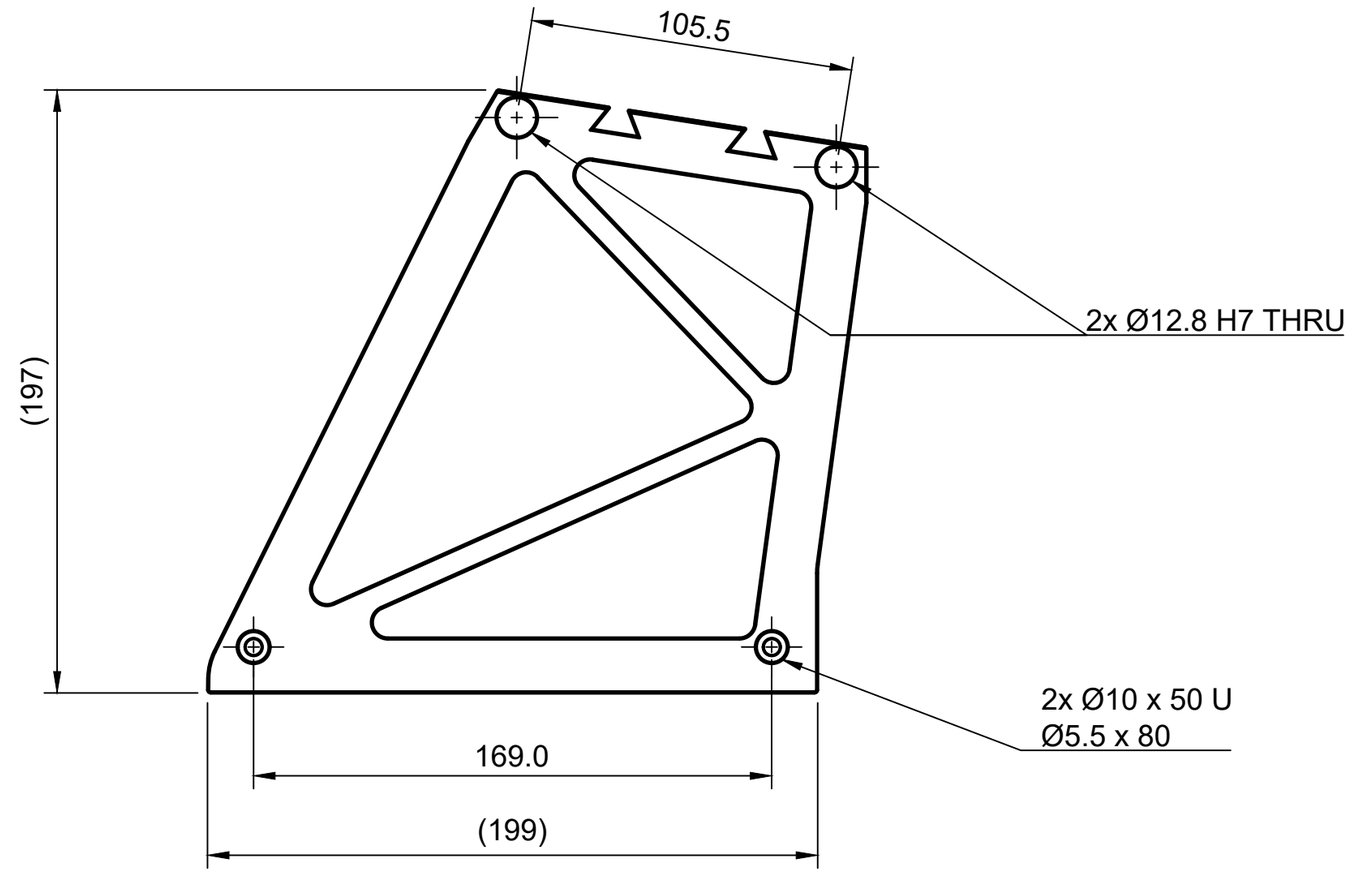


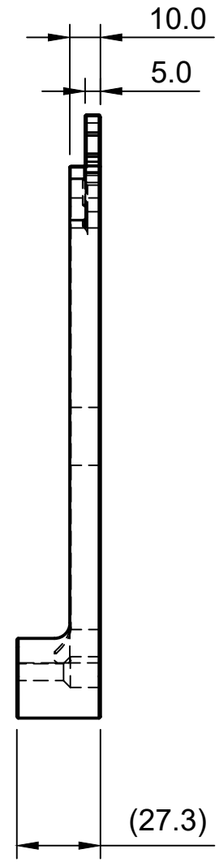


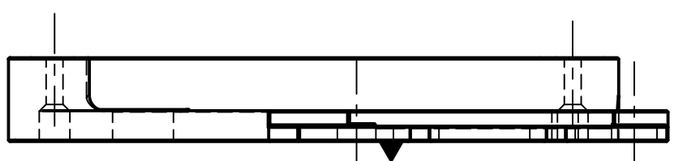
COUNTERBORES ARE CHAMFERED AT 45° TO PRINT WITHOUT SUPPORTS

UNLESS OTHERWISE SPECIFIED	EVAN HALIBURTON		
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: NO DECIMAL: ±0.2 ONE PLACE DECIMAL: ±0.1 TWO PLACE DECIMAL: ±0.05	TITLE TRUSS STRUCTURE OUTER UPPER		
	SIZE A3	DRAWING NO. ME382_043_017	REV A
	SCALE 1:1		SHEET 3/5

- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: PLA
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 3
- DEBURR ALL EDGES







THIS FACE TO BUILD PLATE [A]

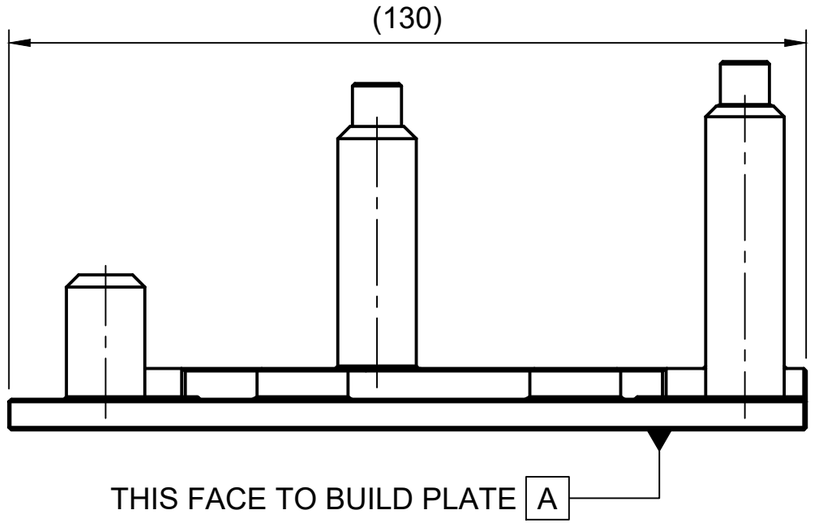
UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

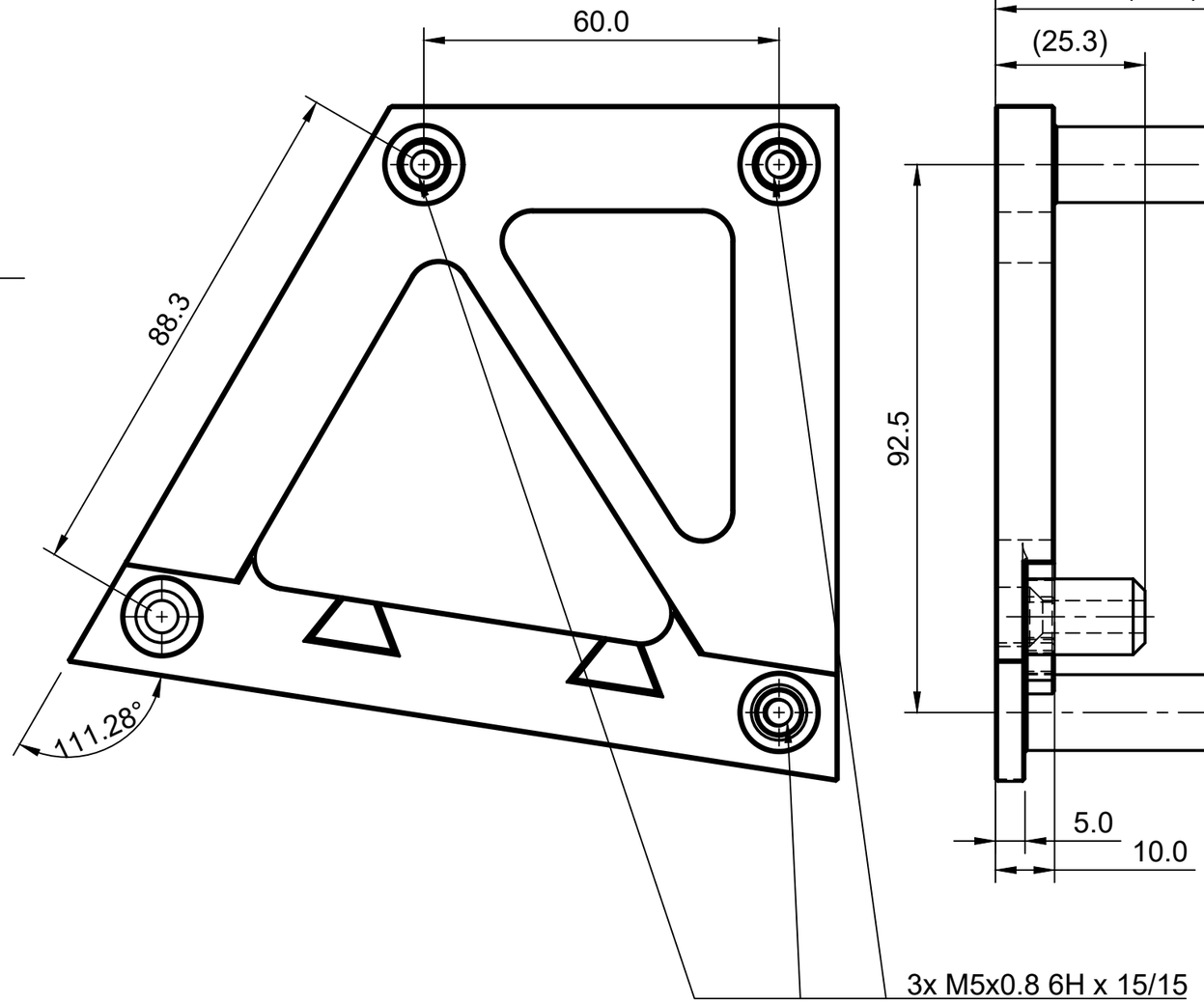
EVAN HALIBURTON

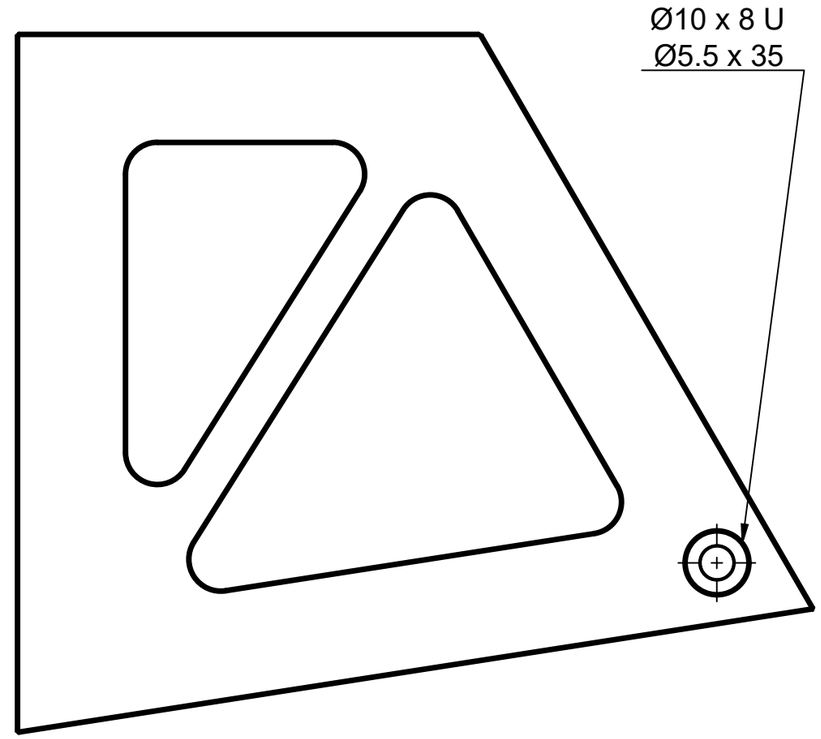
TITLE
TRUSS STRUCTURE INNER LOWER

SIZE	DRAWING NO.	REV
A3	ME382_043_018	A
SCALE 1:2		SHEET 4/5



- PART IS TO BE 3D PRINTED
- PROCESS: FDM
- MATERIAL: PLA
- NOZZLE SIZE: 0.4MM
- LAYER HEIGHT: 0.2MM
- WALLS: 3
- DEBURR ALL EDGES





UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
NO DECIMAL: ±0.2
ONE PLACE DECIMAL: ±0.1
TWO PLACE DECIMAL: ±0.05

EVAN HALIBURTON

TITLE
TRUSS STRUCTURE INNER UPPER

SIZE	DRAWING NO.	REV
A3	ME382_043_019	A
SCALE 1:1		SHEET 5/5