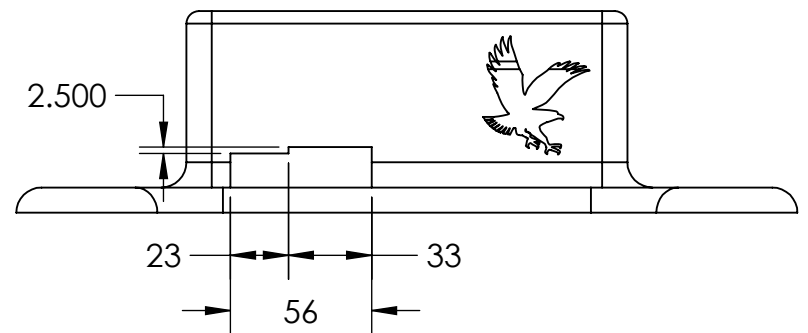
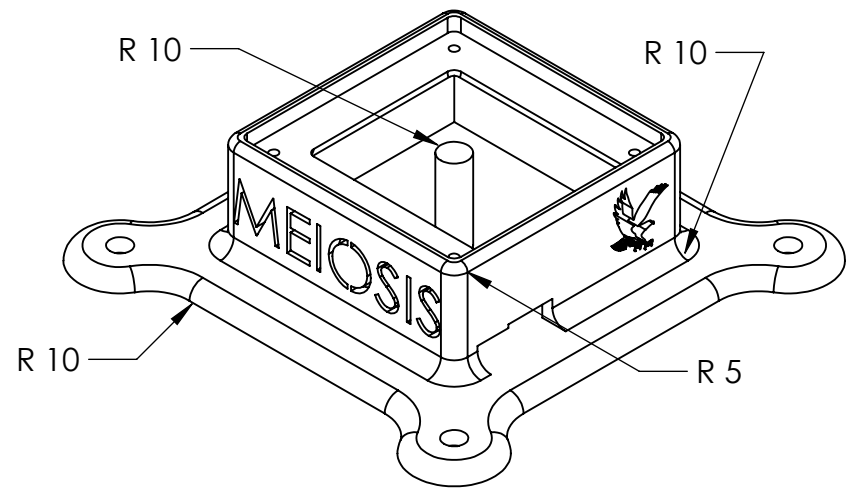
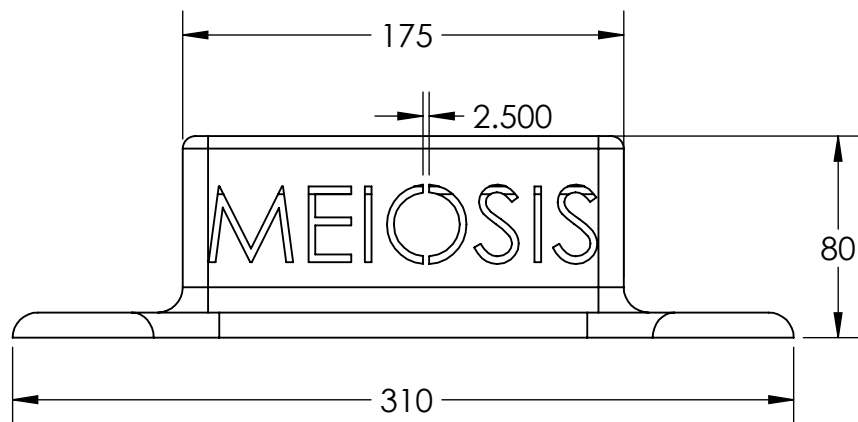
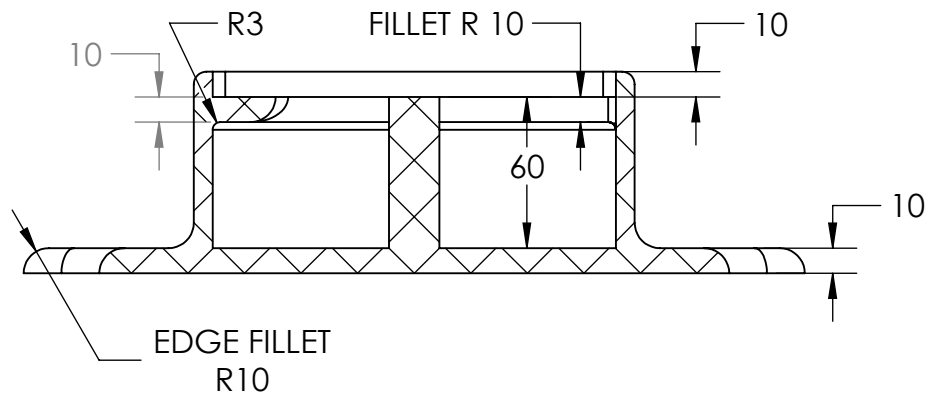


B



B

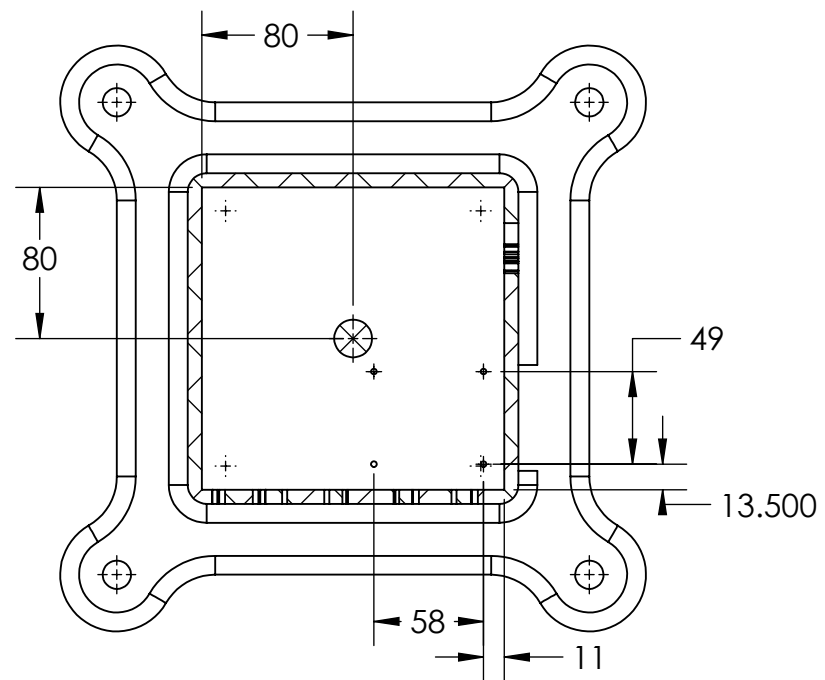
A

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Base Bottom		
DIMENSIONS ARE IN MILLIMETERS  TOLERANCES: ±3.0	DRAWN	Ryan W.	11/13/2019			
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE <b>A</b>  DWG. NO.   REV <b>1.0</b>		
MATERIAL PLA, 30% Infill	COMMENTS:					
FINISH N/A						
DO NOT SCALE DRAWING						
				SCALE: 1:5	WEIGHT:	SHEET 1 OF 18

2

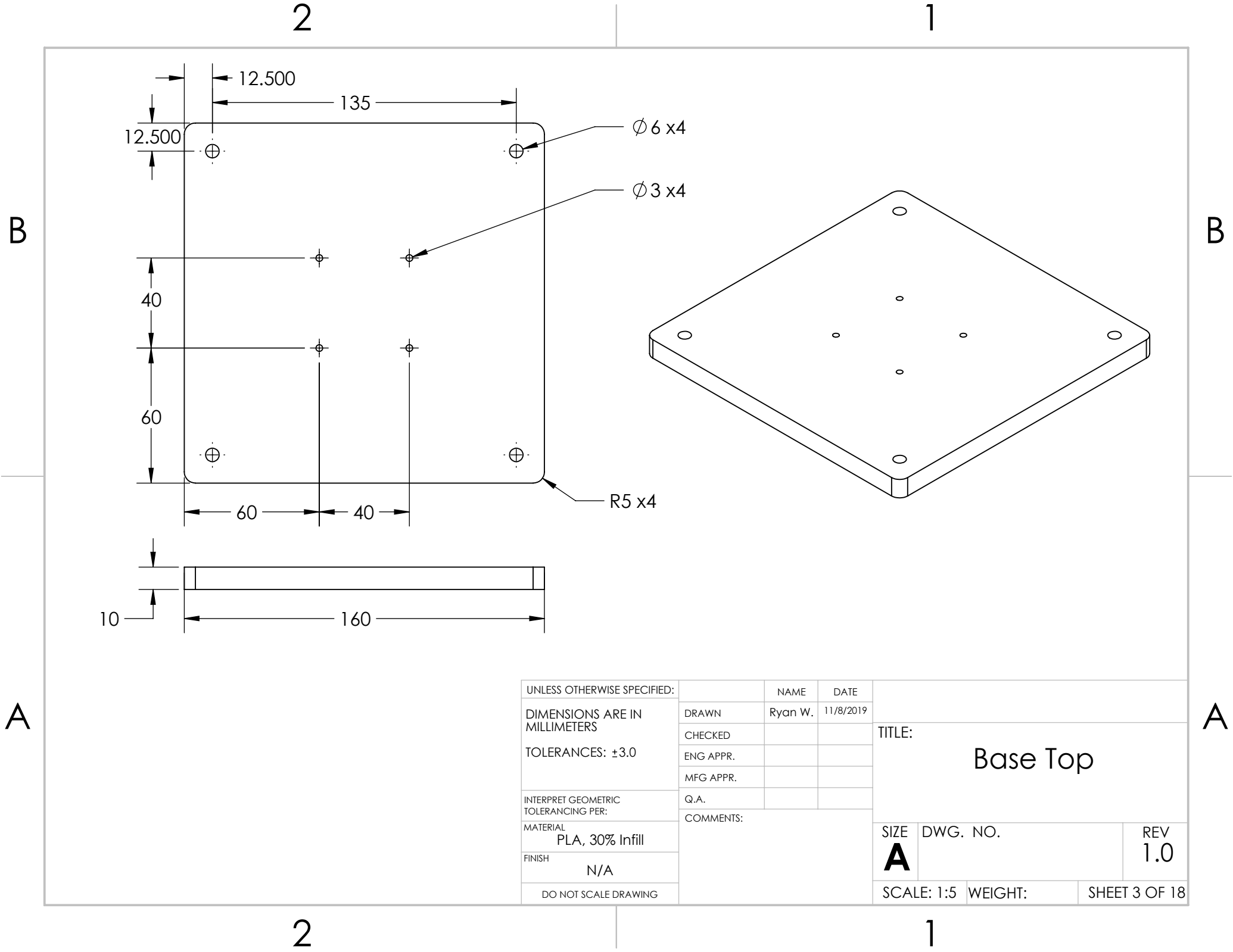
1

1

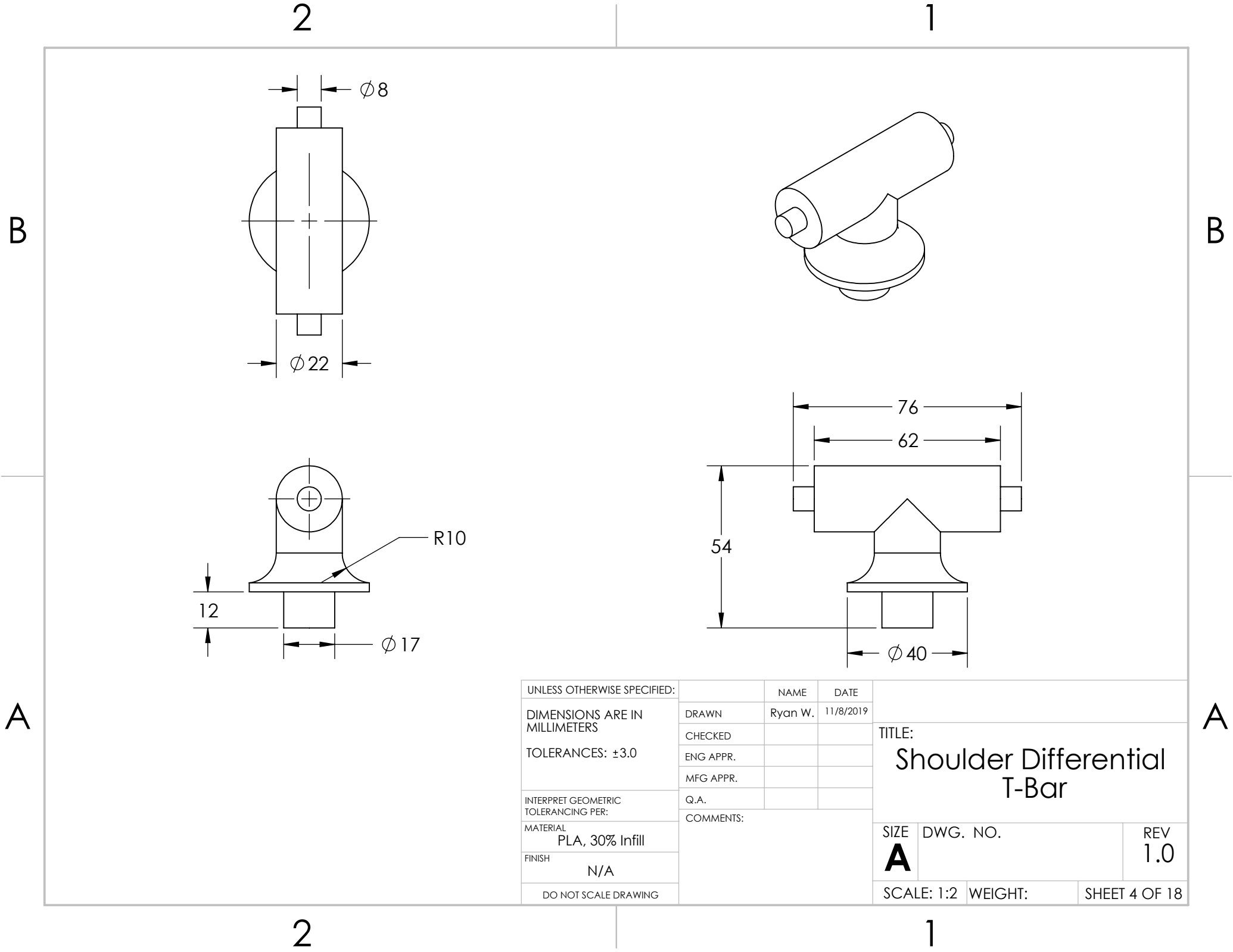


SIZE <b>A</b>	DWG. NO.	REV <b>1.0</b>
SCALE: 1:5	WEIGHT:	SHEET 2 OF 18

1



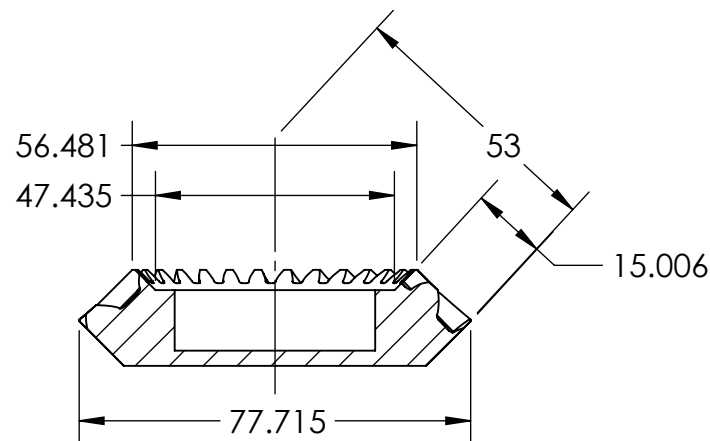
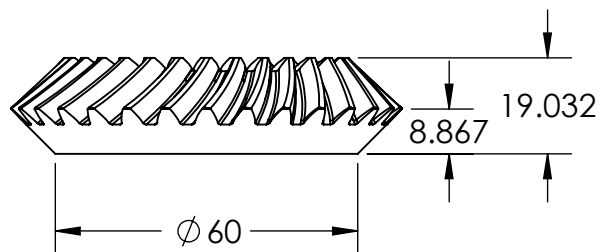
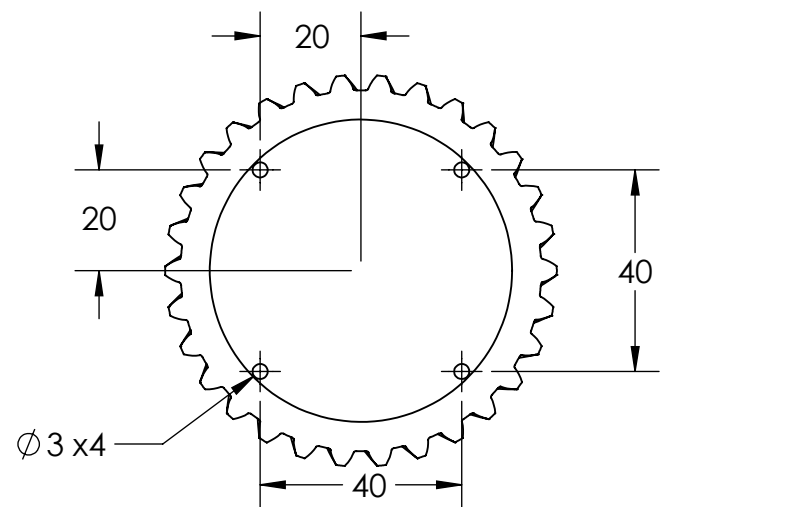
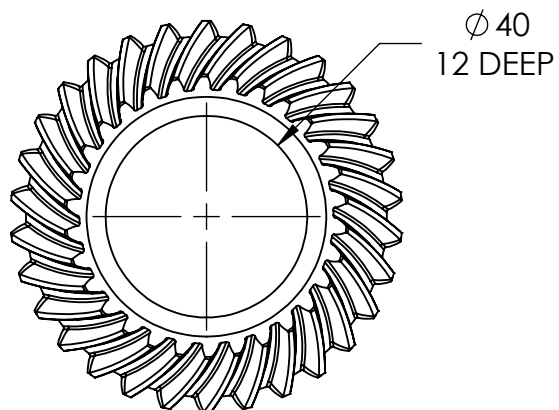
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Base Top			
DIMENSIONS ARE IN MILLIMETERS  TOLERANCES: ±3.0		DRAWN	Ryan W.				11/8/2019
		CHECKED					
		ENG APPR.					
		MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.		SIZE <b>A</b>			
MATERIAL PLA, 30% Infill		COMMENTS:					
FINISH N/A							
DO NOT SCALE DRAWING							
				DWG. NO.	REV 1.0		
				SCALE: 1:5	WEIGHT:	SHEET 3 OF 18	



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE: Shoulder Differential T-Bar	
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$		CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.			
MATERIAL PLA, 30% Infill		MFG APPR.			
FINISH N/A		Q.A.		SIZE <b>A</b>	
DO NOT SCALE DRAWING		COMMENTS:		DWG. NO.	
				REV 1.0	
				SCALE: 1:2	SHEET 4 OF 18

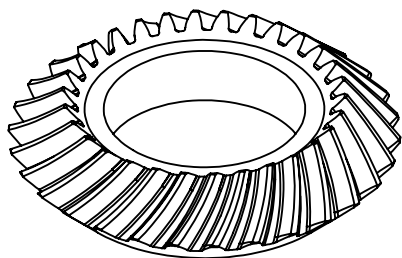
B

B



A

A



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN  
MILLIMETERSTOLERANCES:  $\pm 3.0$ INTERPRET GEOMETRIC  
TOLERANCING PER:MATERIAL  
PLA, 20% InfillFINISH  
N/A

DO NOT SCALE DRAWING

NAME  
DATEDRAWN  
Ryan W. 11/8/2019

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

TITLE:

Shoulder Bevel Gear  
(1)SIZE  
DWG. NO.

A

REV  
1.0

SCALE: 2:3

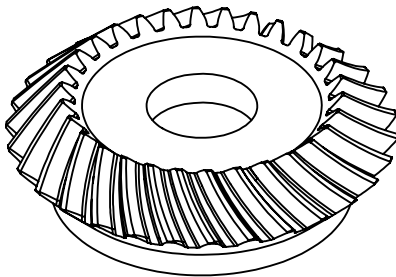
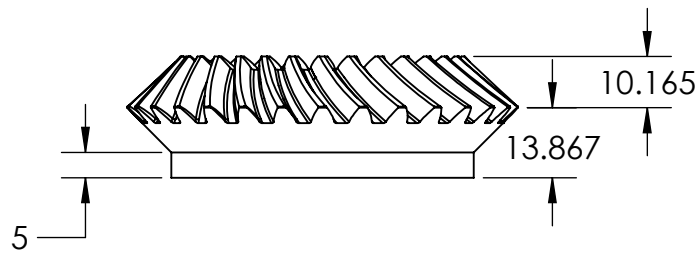
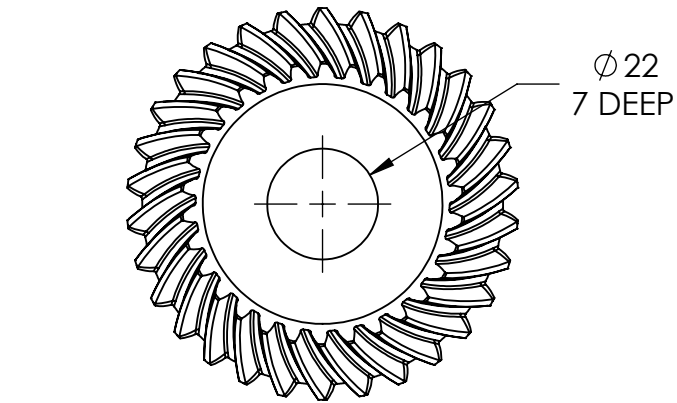
WEIGHT:

SHEET 5 OF 18

2

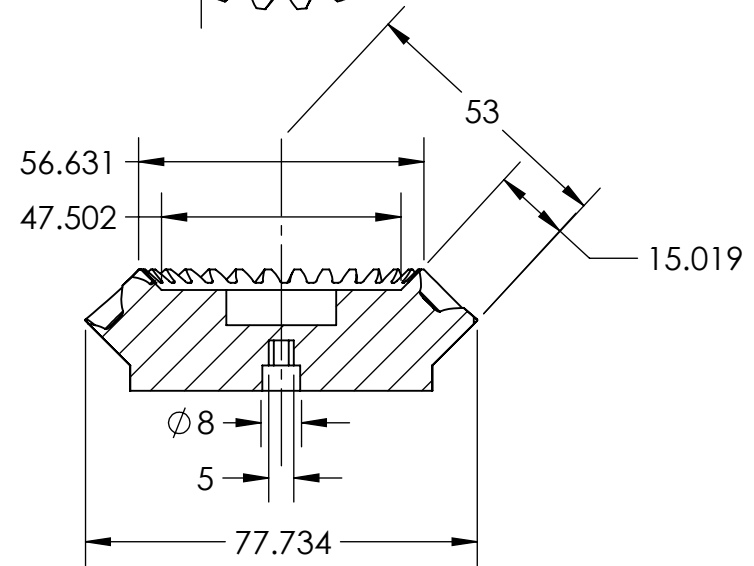
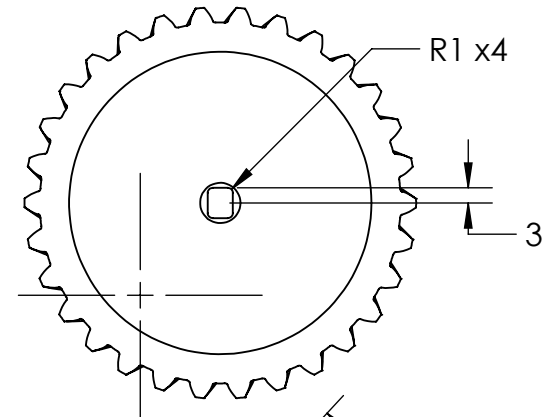
1

B



2

1



B

A

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN  
MILLIMETERSTOLERANCES:  $\pm 3.0$ INTERPRET GEOMETRIC  
TOLERANCING PER:MATERIAL  
PLA, 20% InfillFINISH  
N/A

DO NOT SCALE DRAWING

NAME DATE

DRAWN Ryan W. 11/8/2019

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

TITLE:

Shoulder Bevel Gear  
(2)

SIZE DWG. NO.

A

REV  
1.0

SCALE: 2:3

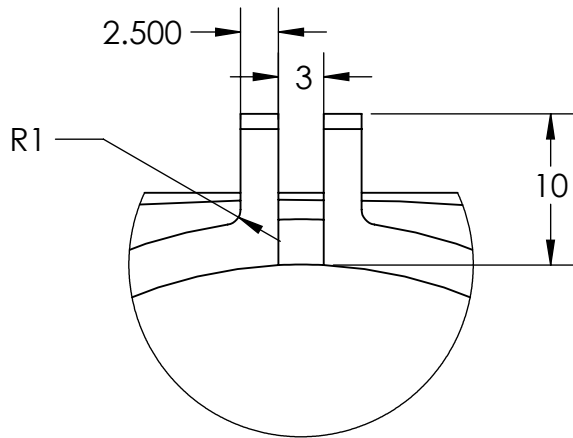
WEIGHT:

SHEET 6 OF 18

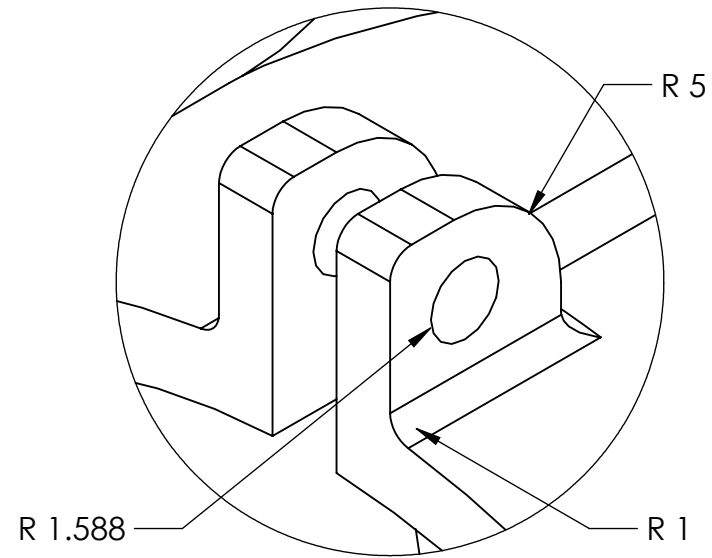
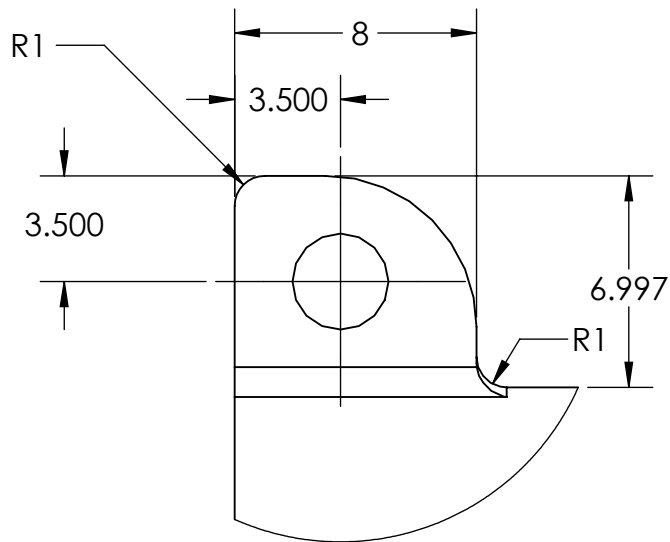
1

B

B



SCALE 2:1



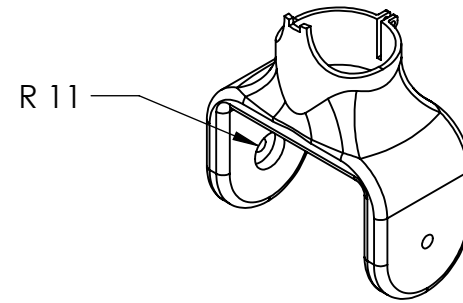
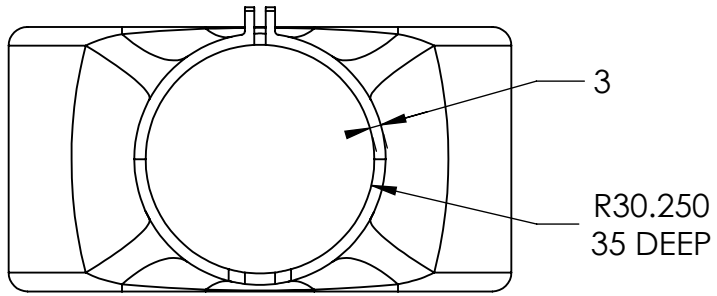
A

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  CLAMP DESIGN						
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.				11/20/2019			
TOLERANCES: ±3.0		CHECKED								
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.								
MATERIAL		MFG APPR.								
FINISH		Q.A.			SIZE <b>A</b>		DWG. NO.		REV 1.0	
DO NOT SCALE DRAWING		COMMENTS:  THIS DRAWING SHOWS THE CLAMPING MECHANISM TO BE USED FOR LINK 2_A, LINK 2_B, LINK 3_A, AND LINK 3_B.								
			SCALE: 4:1		WEIGHT:		SHEET 7 OF 18			

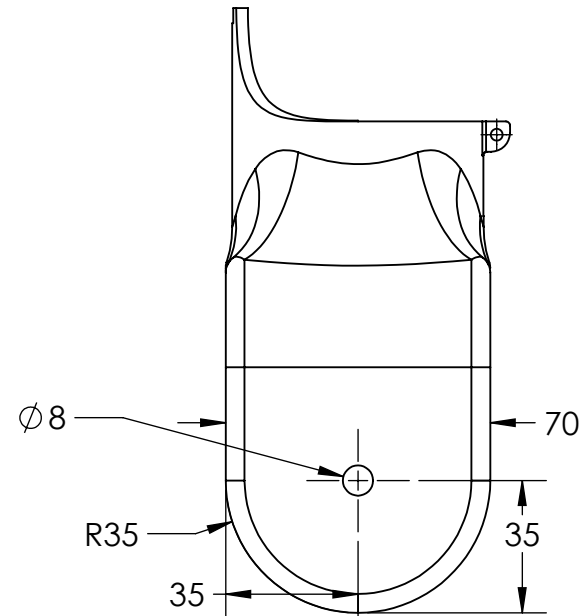
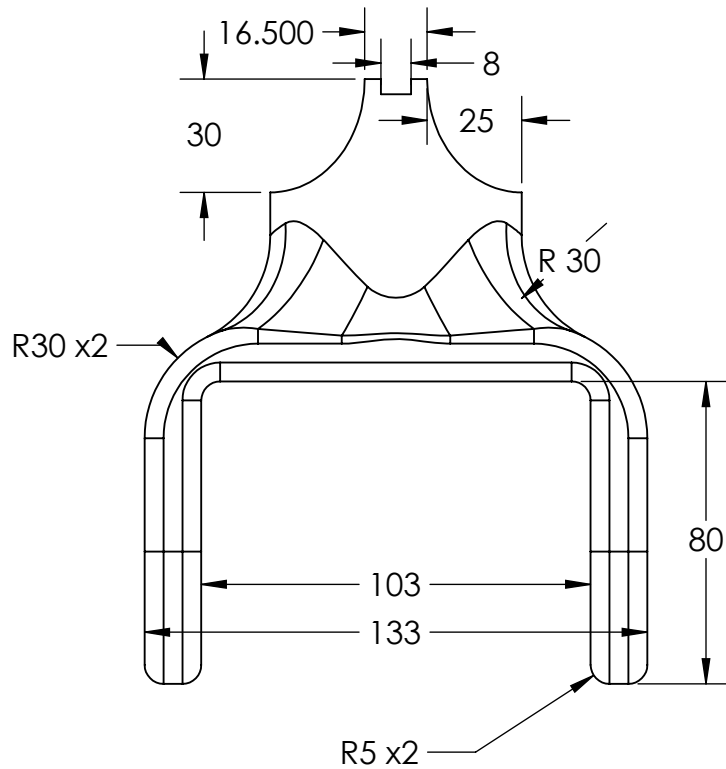
A

2

1

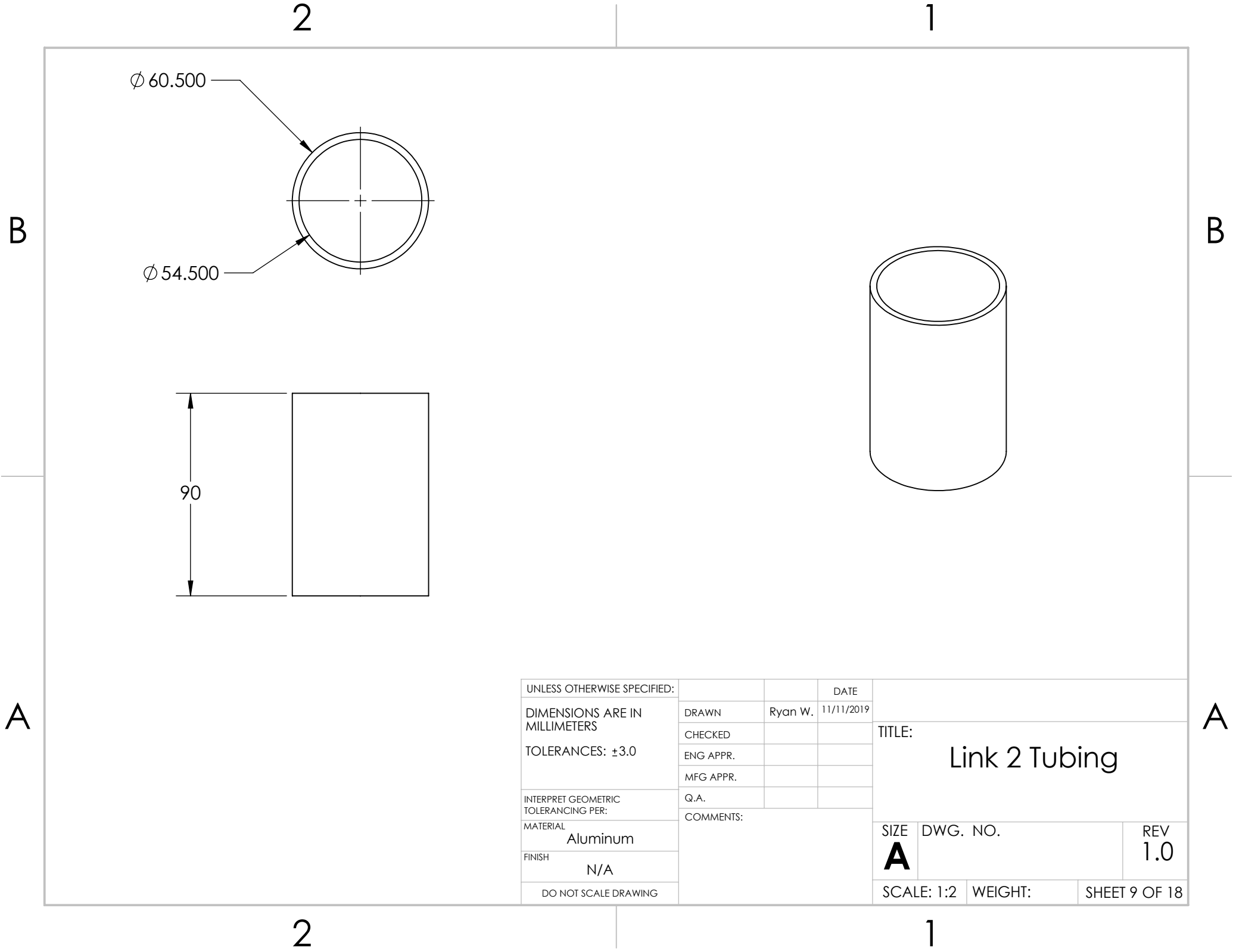


SCALE 1:4



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Link 2_a	
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$		CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.			
MATERIAL PLA, 30% Infill		MFG APPR.			
FINISH N/A		Q.A.		<div>SIZE</div> <div><b>A</b></div>	<div>DWG. NO.</div> <div></div>
DO NOT SCALE DRAWING		COMMENTS:			
				SCALE: 1:2	<div>REV</div> <div>1.0</div>
				WEIGHT:	SHEET 8 OF 18

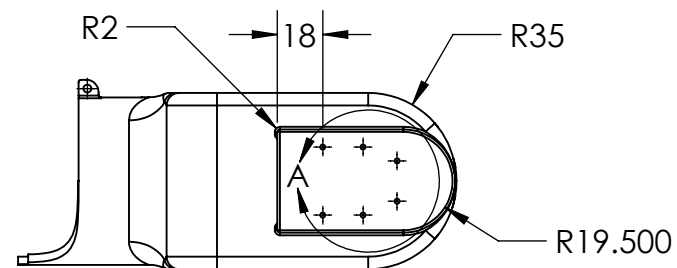
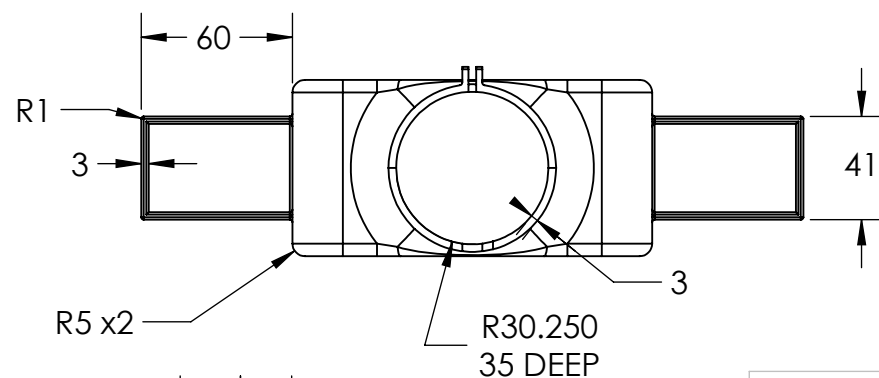
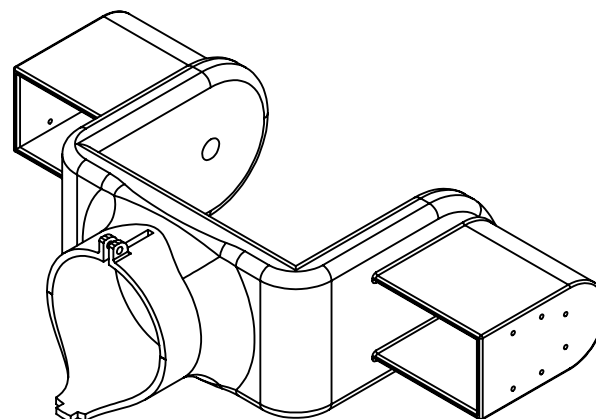
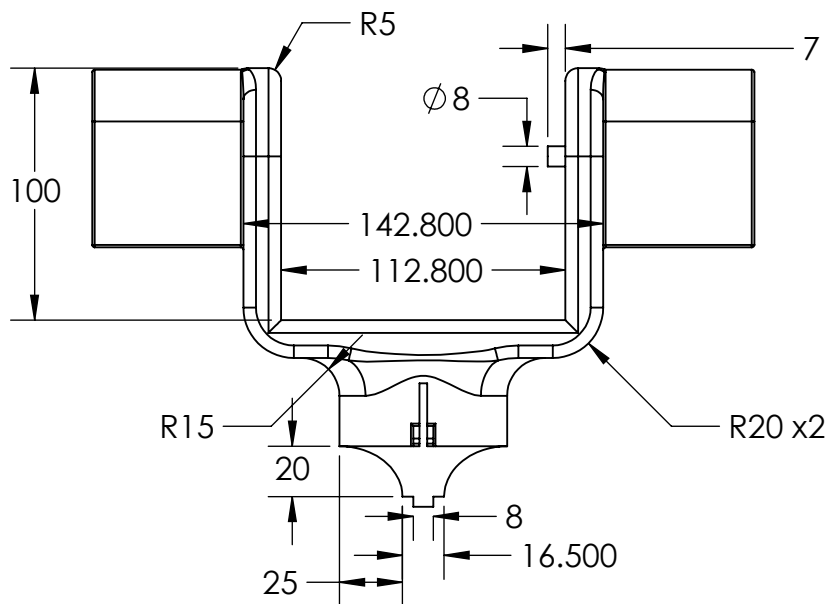




UNLESS OTHERWISE SPECIFIED:				TITLE:  Link 2 Tubing		
DIMENSIONS ARE IN MILLIMETERS  TOLERANCES: ±3.0	DRAWN	Ryan W.	11/11/2019			
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
MATERIAL Aluminum	COMMENTS:			SIZE A	DWG. NO.	REV 1.0
FINISH N/A				SCALE: 1:2	WEIGHT:	SHEET 9 OF 18
DO NOT SCALE DRAWING						

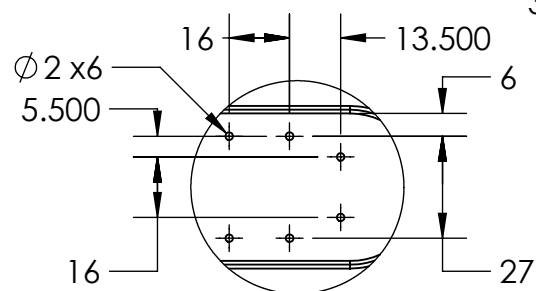
B

B



A

A



DETAIL A  
SCALE 1 : 2

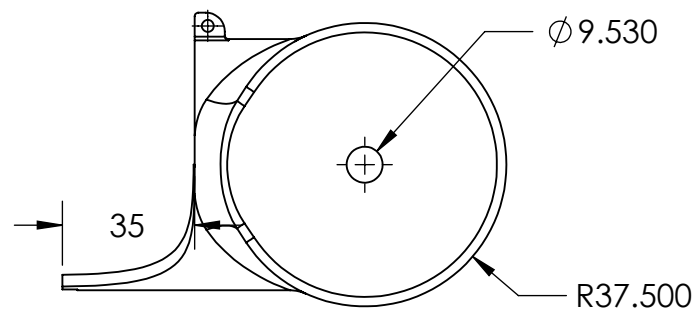
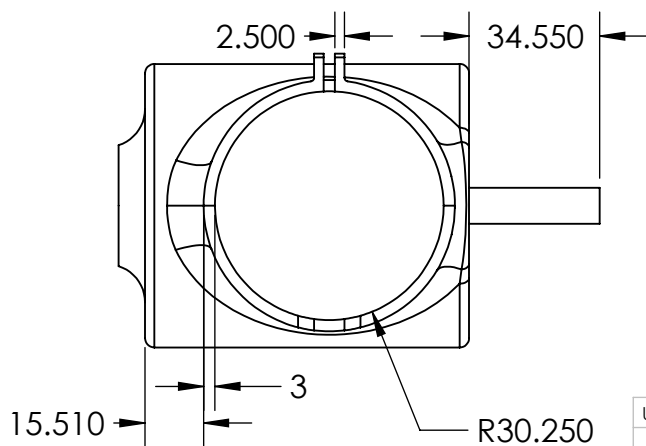
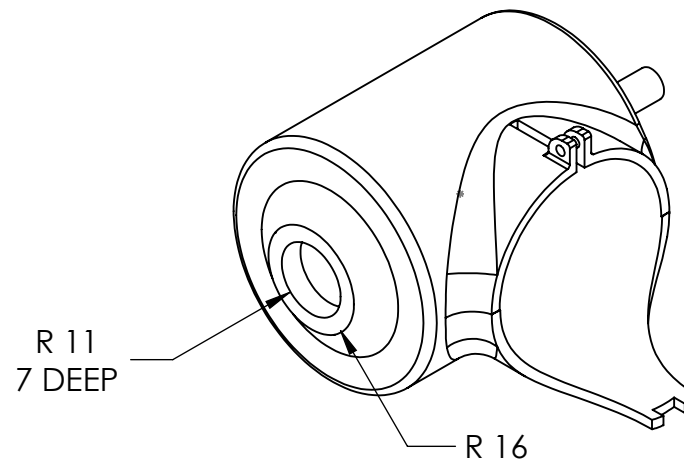
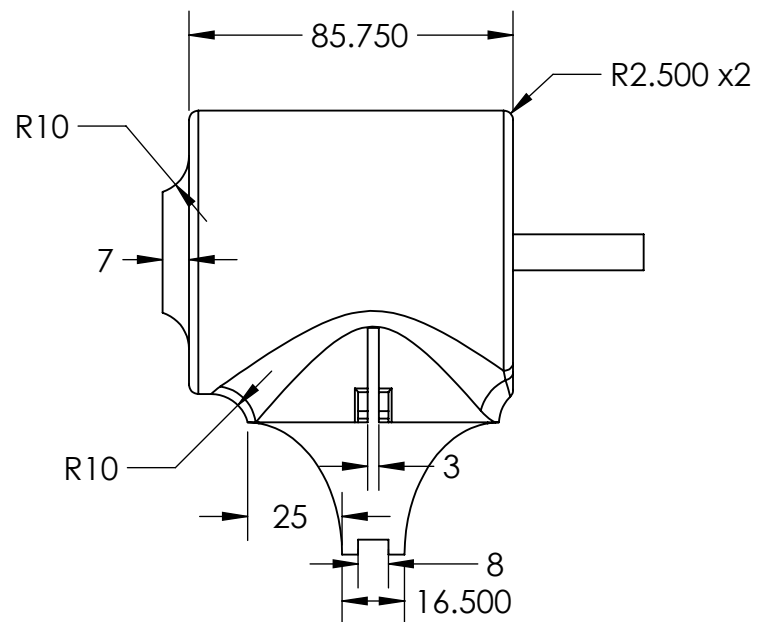
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Link 2_b	
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$		CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.			
MATERIAL PLA, 30% Infill		MFG APPR.			
FINISH N/A		Q.A.		REV 1.0	
DO NOT SCALE DRAWING		COMMENTS:		SIZE <b>A</b>	SCALE: 1:3
				DWG. NO.	WEIGHT:
				SHEET 10 OF 18	

2

1

B

B



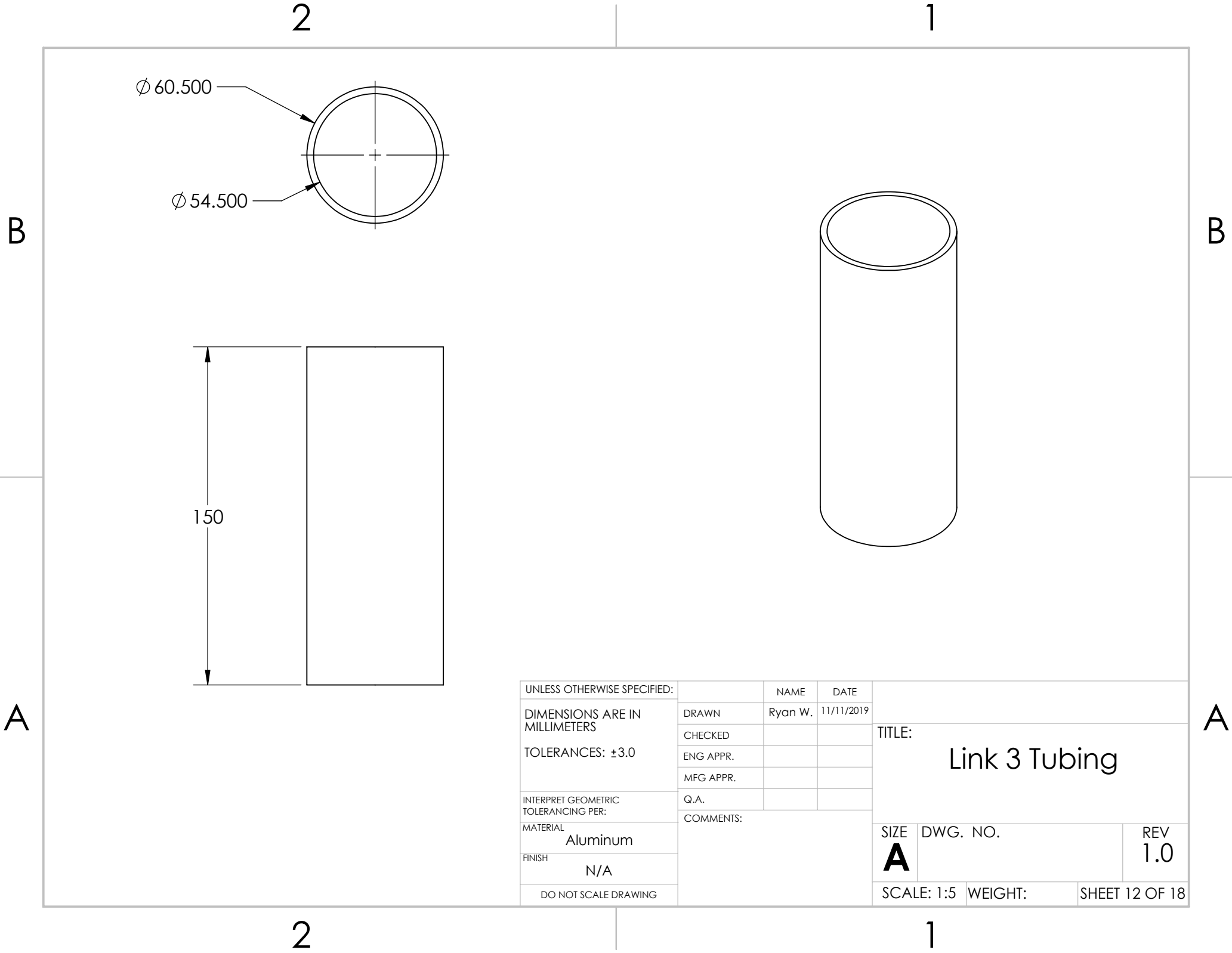
A

A

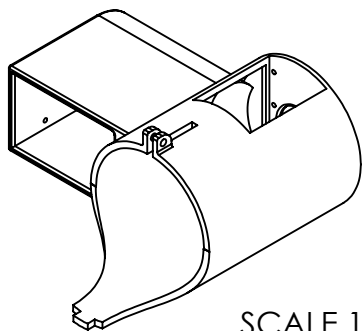
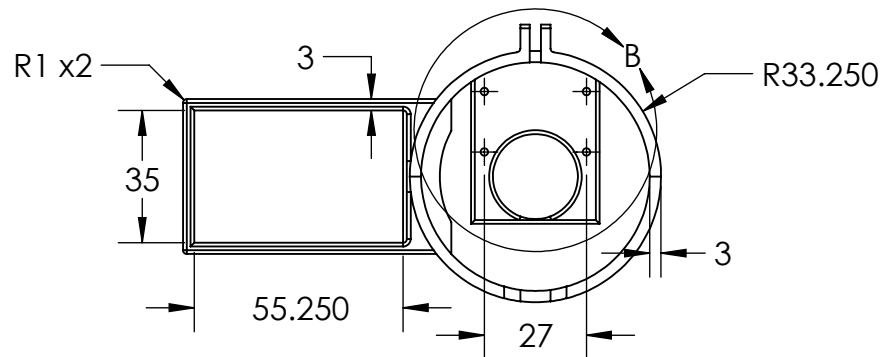
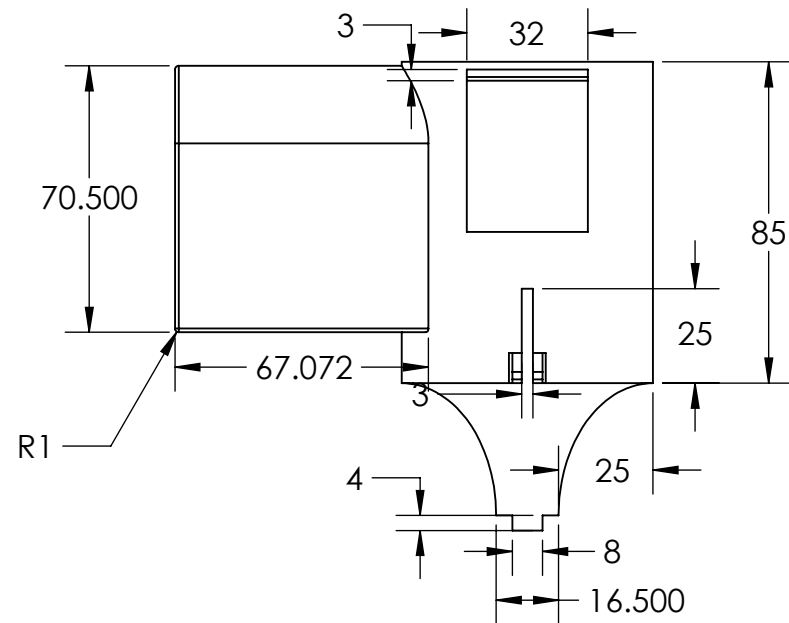
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Link 3_a	
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$		CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.			
MATERIAL PLA, 30% Infill		MFG APPR.			
FINISH N/A		Q.A.		SIZE <b>A</b>	
DO NOT SCALE DRAWING		COMMENTS:		DWG. NO.	
				REV 1.0	
				SCALE: 1:2	WEIGHT: SHEET 11 OF 18

2

1

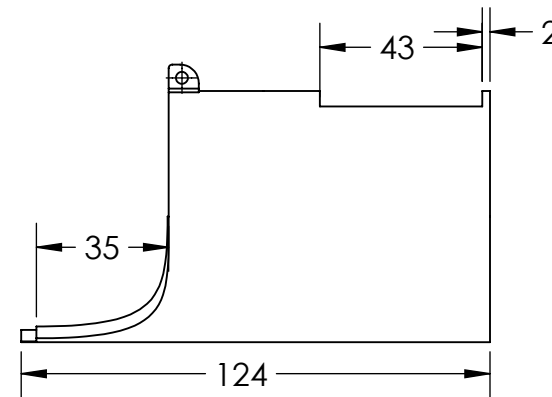
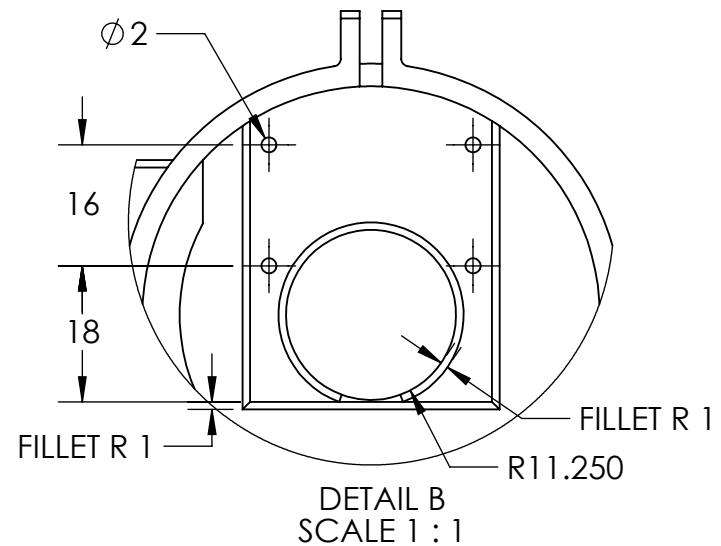


B



SCALE 1:3

1



B

A

UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE:  Link 3_b	
DIMENSIONS ARE IN MILLIMETERS	DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$	CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:	ENG APPR.			
MATERIAL PLA, 30% Infill	MFG APPR.			
FINISH N/A	Q.A.		SIZE DWG. NO. REV <b>A</b>	
DO NOT SCALE DRAWING	COMMENTS:			
			SCALE: 1:2	WEIGHT: SHEET 13 OF 18

2

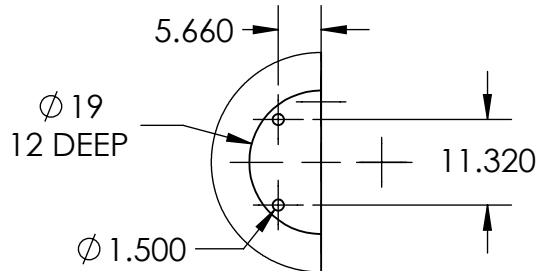
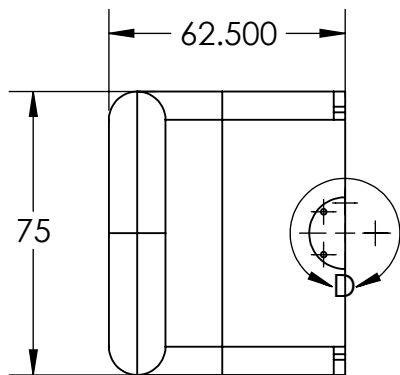
1

B

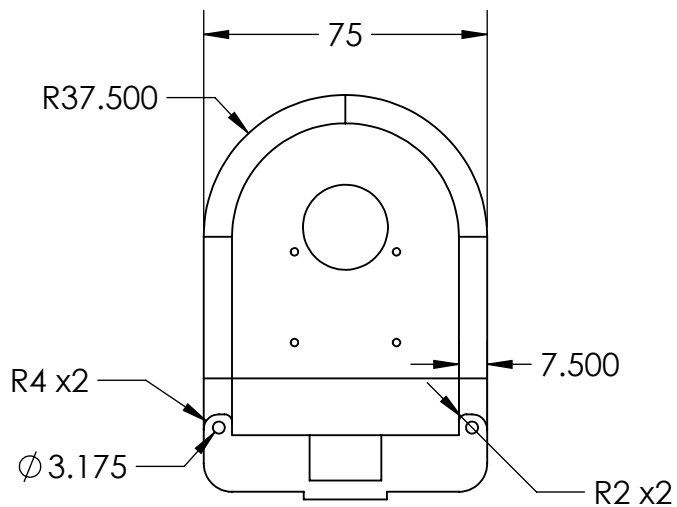
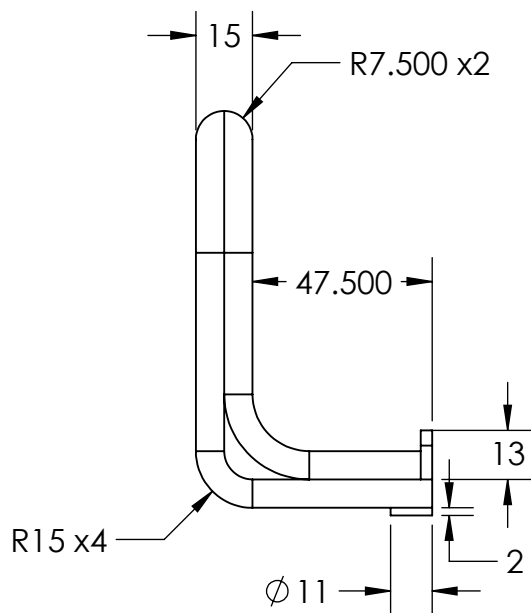
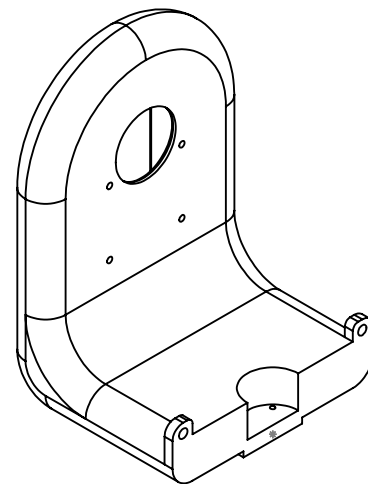
B

A

A



DETAIL D  
SCALE 1 : 1



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN  
MILLIMETERS

TOLERANCES:  $\pm 3.0$

INTERPRET GEOMETRIC  
TOLERANCING PER:

MATERIAL  
PLA, 30% Infill

FINISH

N/A

DO NOT SCALE DRAWING

NAME DATE

DRAWN Ryan W. 11/11/2019

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

TITLE:

Link 4

SIZE DWG. NO.

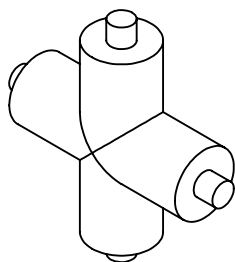
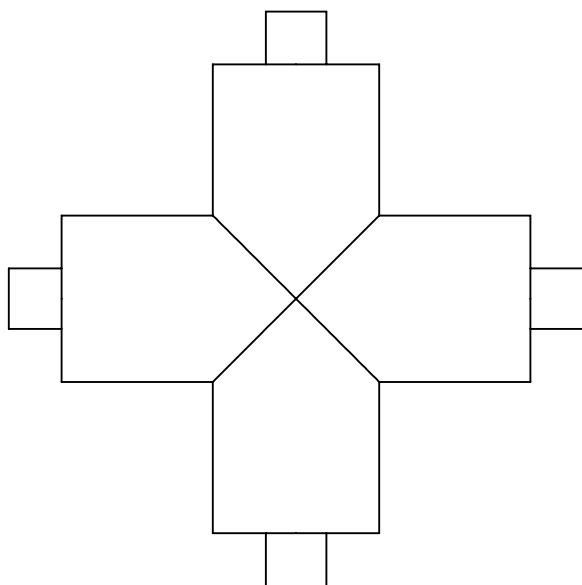
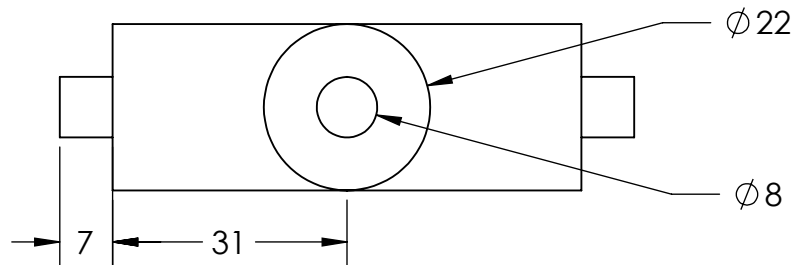
**A**

REV  
1.0

SCALE: 1:2 WEIGHT:

SHEET 14 OF 18

B



SCALE 1:2

A

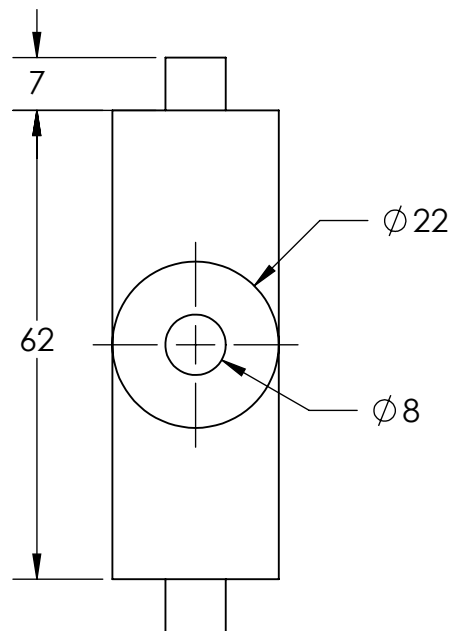
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE:  Wrist Differential Crossbar		
DIMENSIONS ARE IN MILLIMETERS	DRAWN	Ryan W.	11/8/2019			
TOLERANCES: ±3.0	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE <b>A</b>		
MATERIAL PLA, 30% Infill	COMMENTS:					
FINISH N/A						
DO NOT SCALE DRAWING				SCALE: 1:1		WEIGHT:

2

1

B

A

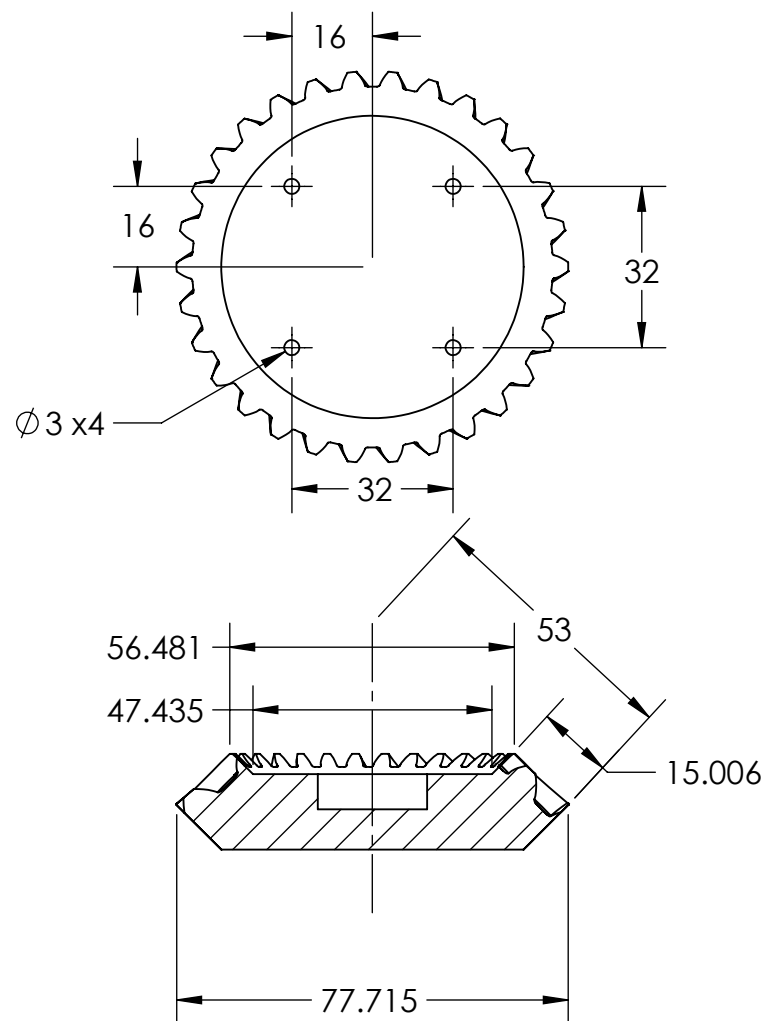
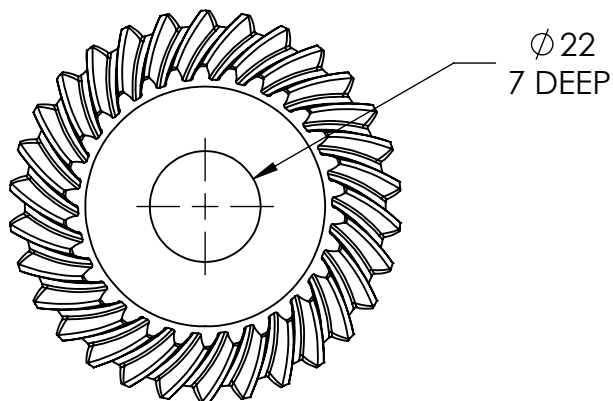
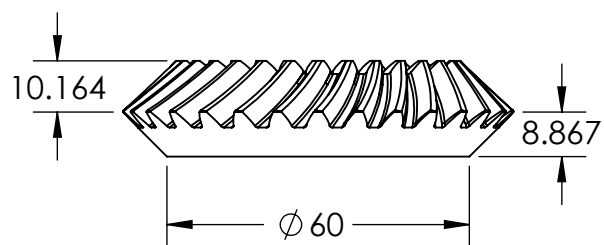
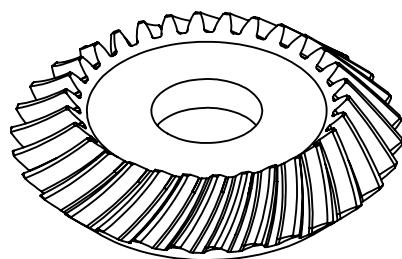


B

B

A

A



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN  
MILLIMETERSTOLERANCES:  $\pm 3.0$ INTERPRET GEOMETRIC  
TOLERANCING PER:MATERIAL  
PLA, 20% InfillFINISH  
N/A

DO NOT SCALE DRAWING

DRAWN

NAME

Ryan W.

DATE

11/8/2019

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

TITLE:

Wrist Bevel Gear (1)

SIZE

A

DWG. NO.

REV

1.0

SCALE: 2:3

WEIGHT:

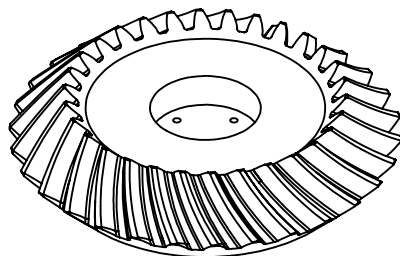
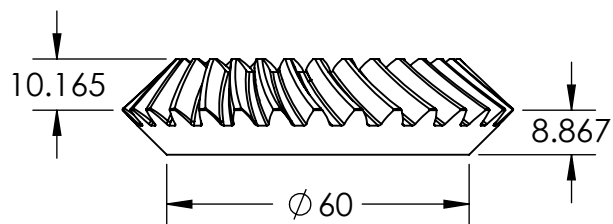
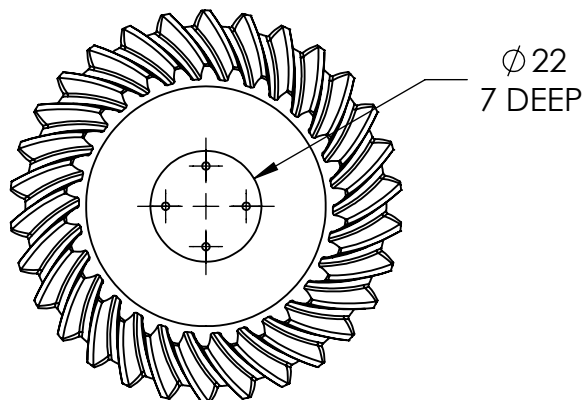
SHEET 16 OF 18

2

1

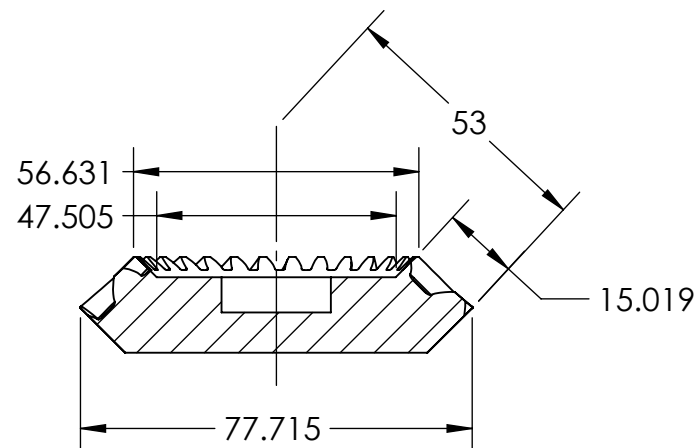
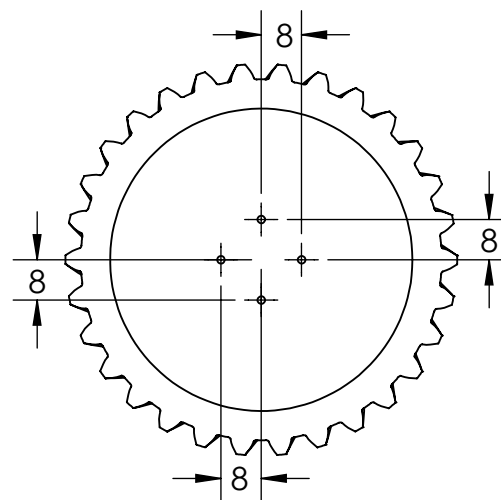


B



2

1



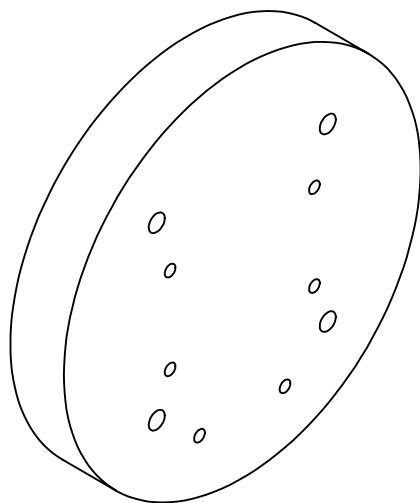
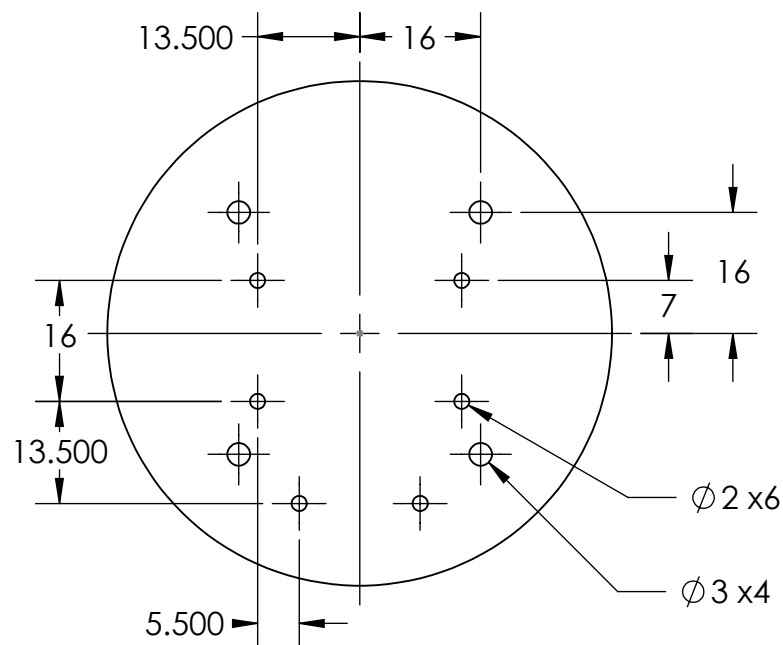
B

A

1

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE: <b>Wrist Bevel Gear (2)</b>	
DIMENSIONS ARE IN MILLIMETERS		DRAWN	Ryan W.		
TOLERANCES: $\pm 3.0$		CHECKED			
INTERPRET GEOMETRIC TOLERANCING PER:		ENG APPR.			
MATERIAL PLA, 20% Infill		MFG APPR.			
FINISH N/A		Q.A.		REV 1.0	
DO NOT SCALE DRAWING		COMMENTS:		SIZE <b>A</b>	SCALE: 2:3
				DWG. NO.	WEIGHT:
				SHEET 17 OF 18	

1



UNLESS OTHERWISE SPECIFIED:		NAME		DATE		TITLE:  End Effector			
DIMENSIONS ARE IN MILLIMETERS  TOLERANCES: ±3.0		DRAWN	Ryan W.	11/11/2019					
		CHECKED							
		ENG APPR.							
		MFG APPR.							
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.				SIZE <b>A</b>  DWG. NO.      REV <b>1.0</b>			
MATERIAL PLA, 20% Infill		COMMENTS:							
FINISH N/A									
DO NOT SCALE DRAWING									

SIZE  
**A**

SCALE: 1:2

WEIGHT:

SHEET 18 OF 18

1

2