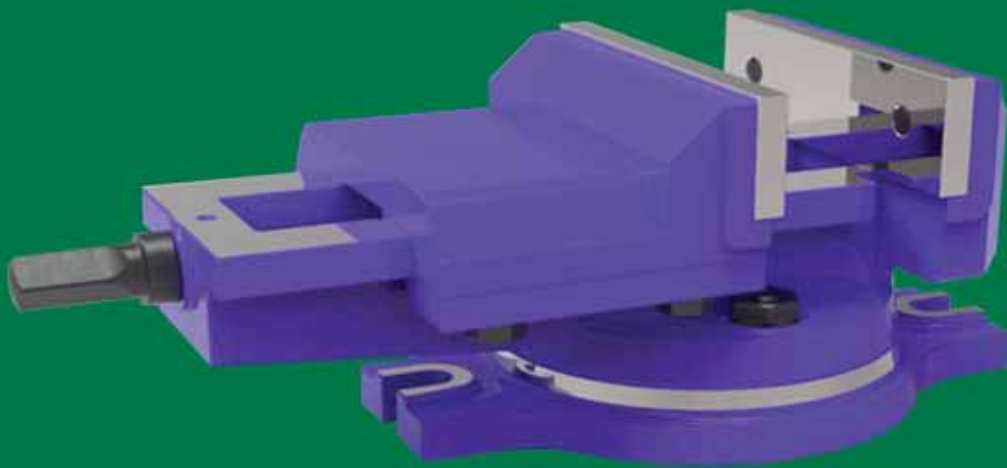


*PRODUCT DESIGN
EXERCISES
WORKBOOK OF
EVERYDAY THINGS
Collection*



Kovalan.S

PRODUCT DESIGN EXERCISES
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PRODUCT DESIGN EXERCISES WORKBOOK OF EVERYDAY THINGS - COLLECTION

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Preface

This book was created to feed budding CAD designers with a variety of Real-world 3D CAD Models while they are learning and mastering the art of CAD.

This Workbook is a CAD neutral Exercise book and can be used along to, practice and learn any latest 3D CAD modelling software out there in the market.

This book is not a tutorial to teach CAD, but is only to practise with the contained exercise drawings. All the drawings have been dimensioned to facilitate the reader to recreate them.

This book contains 50 Products and is a Collection of the Best from my other 4 Volumes on this topic.

Dedication

I dedicate this book to

My Family

&

Friends.

A special thanks to
Tamilselvan & Naresh
for their valuable support.

Disclaimer

In this book you will find 50 3D Products all detailed in 2D to practice for students and others learning a 3D CAD Modelling software.

All the drawings have been dimensioned to facilitate easy replication of the drawings.

This book does not contain any step by step instructions to use any software or to draw any of the exercises. Readers will have to use their knowledge of the software to reconstruct the drawings with the dimensions provided.

Resources

Additional 2D & 3D CAD Exercise book can be downloaded from the following web site: www.2d3dcadex.com

Additional practice exercises may also be made available from time to time in the above web site.

You can also try out my other titles on Basic 2D and 3D modelling exercises available on Amazon Kindle.

1. 2D 3D CAD EXERCISES VOLUMES 1, 2 & 3.
2. 200 – 2D 3D CAD EXERCISES.

Most leading CAD software makers offer trial / student versions. For trial version installation of 2D or 3D CAD Modelling software search in www.google.com with search string like: <CAD software name> trial

You could find links to download your desired software trial version with which you can practice the CAD Exercises. You may also purchase the Student version of the software from their official web site.

3 JAW CHUCK



6

5

4

3

2

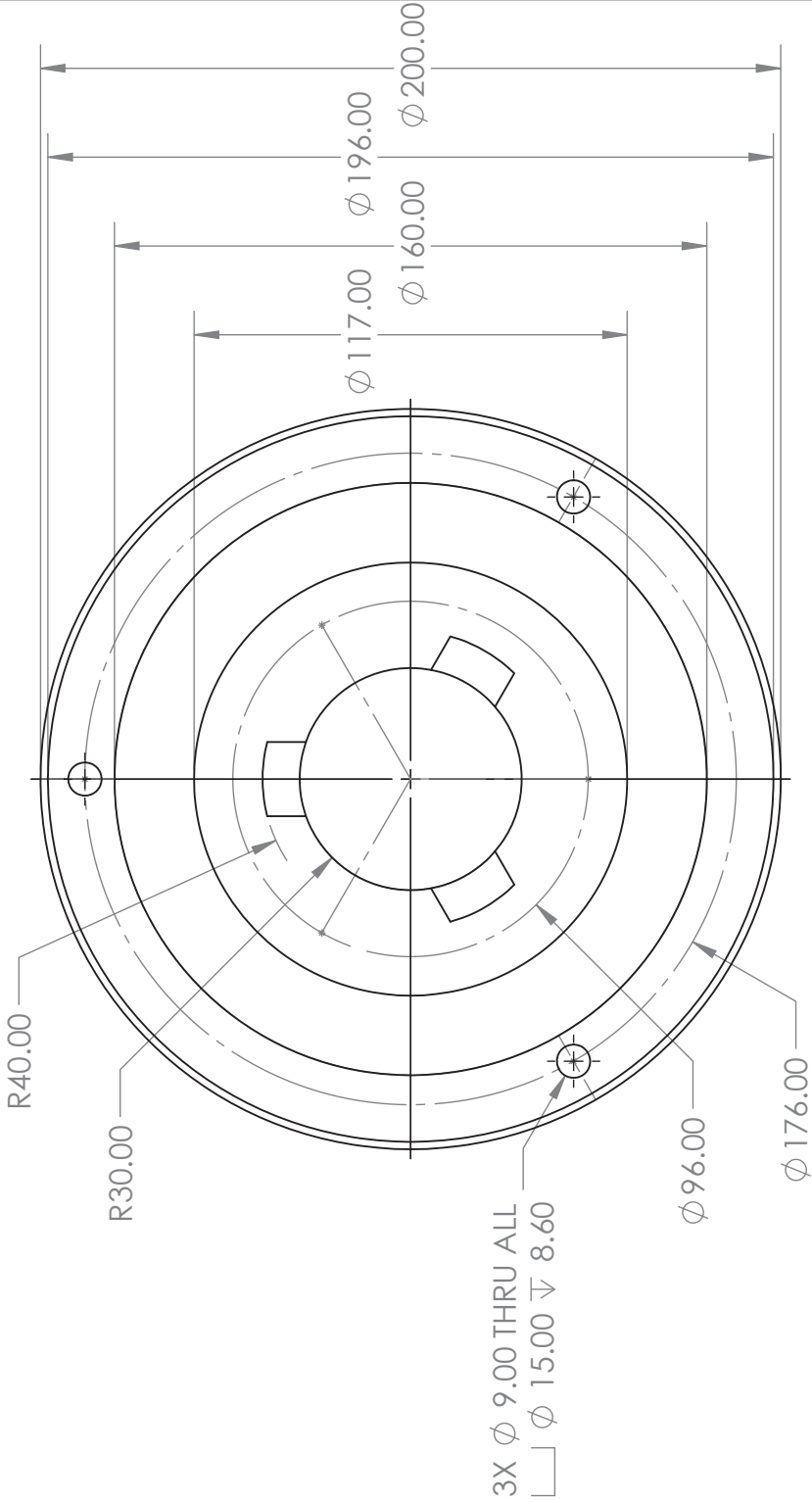
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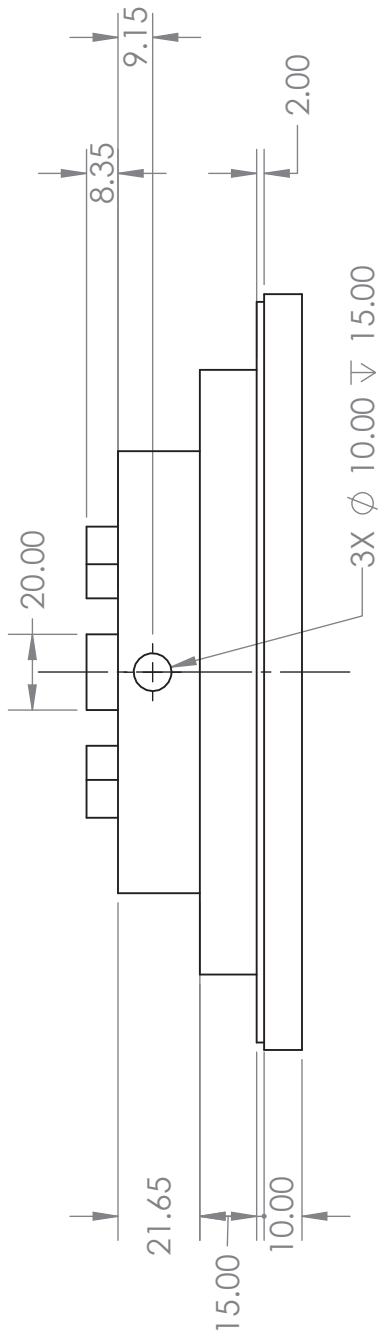
C

B

A₉



ISOMETRIC VIEW



DESCRIPTION.

Chuck Body

SHEET

1 OF 5

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

6

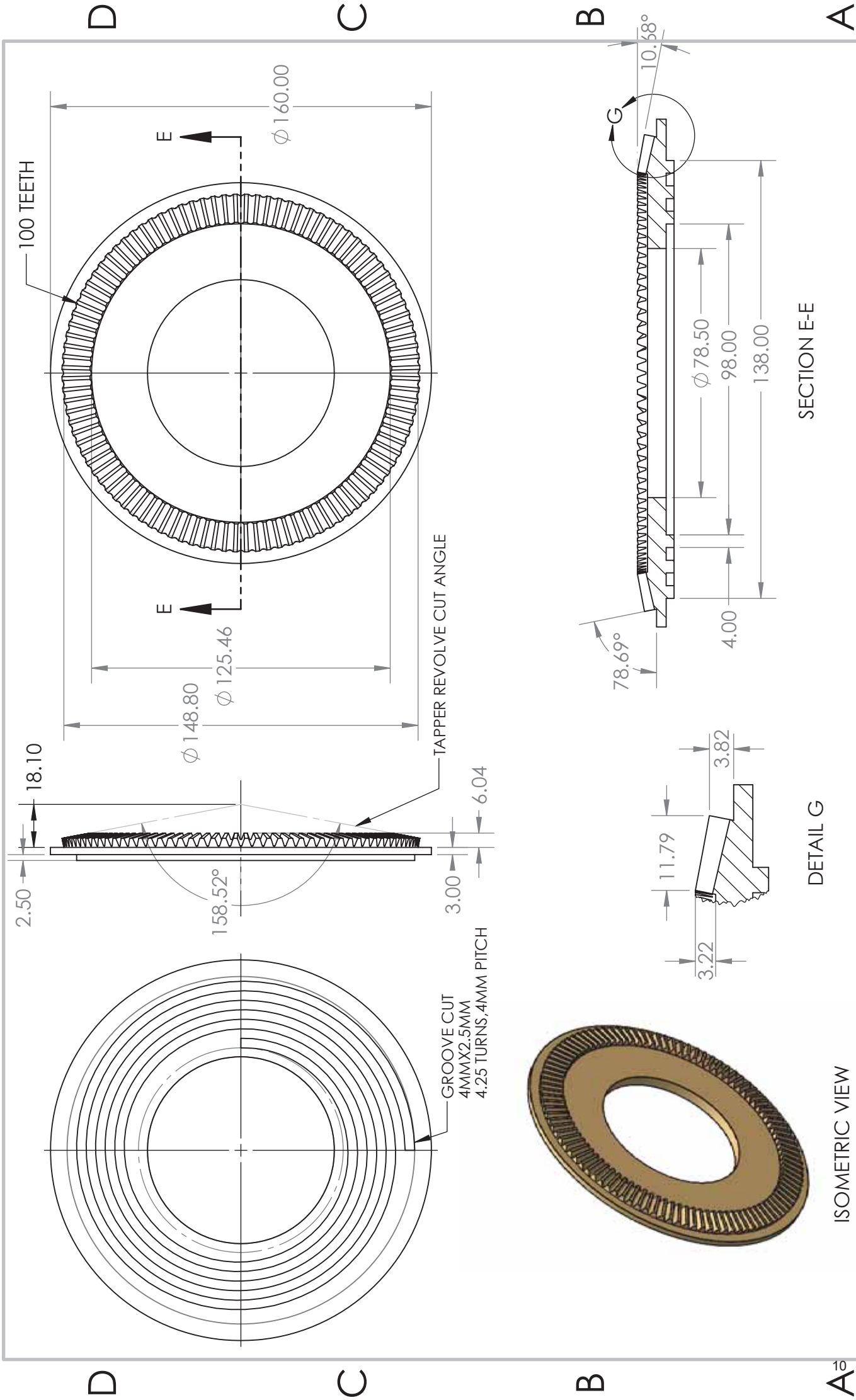
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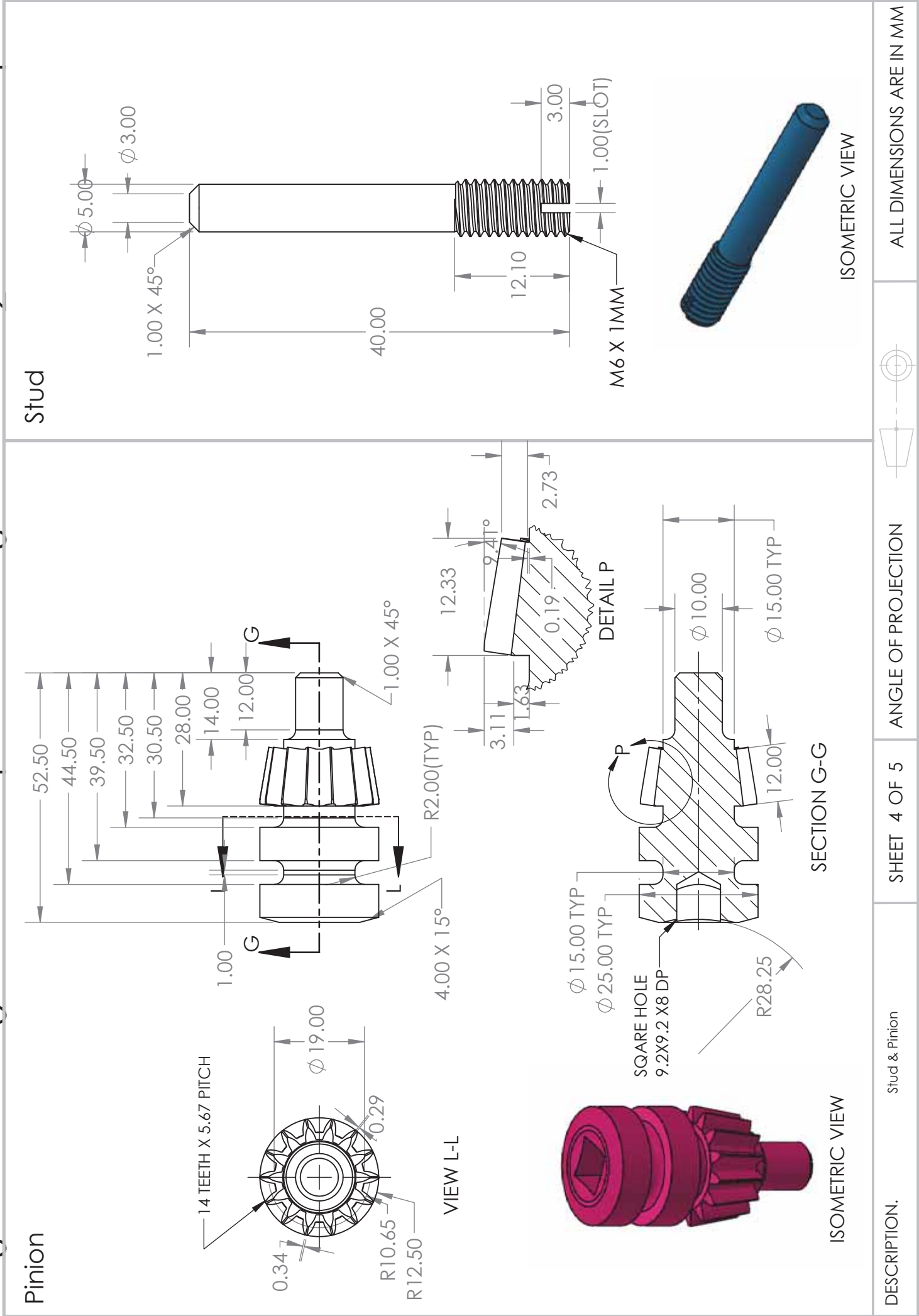
3

2

1

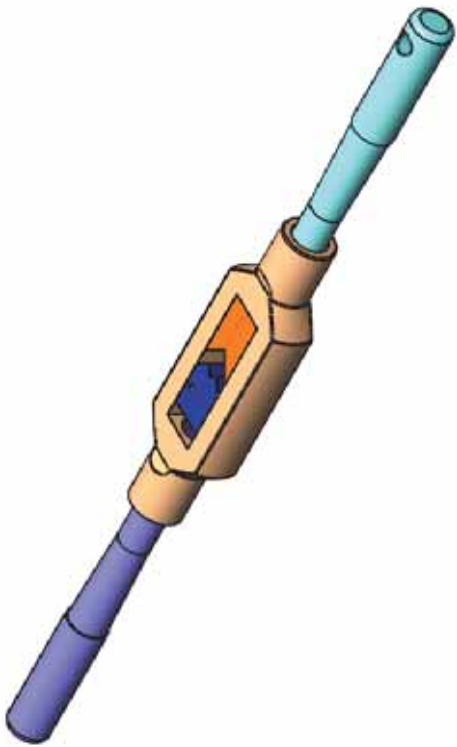


DESCRIPTION.		Drive Gear	SHEET 2 OF 5	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
--------------	--	------------	--------------	---------------------	--------------------------

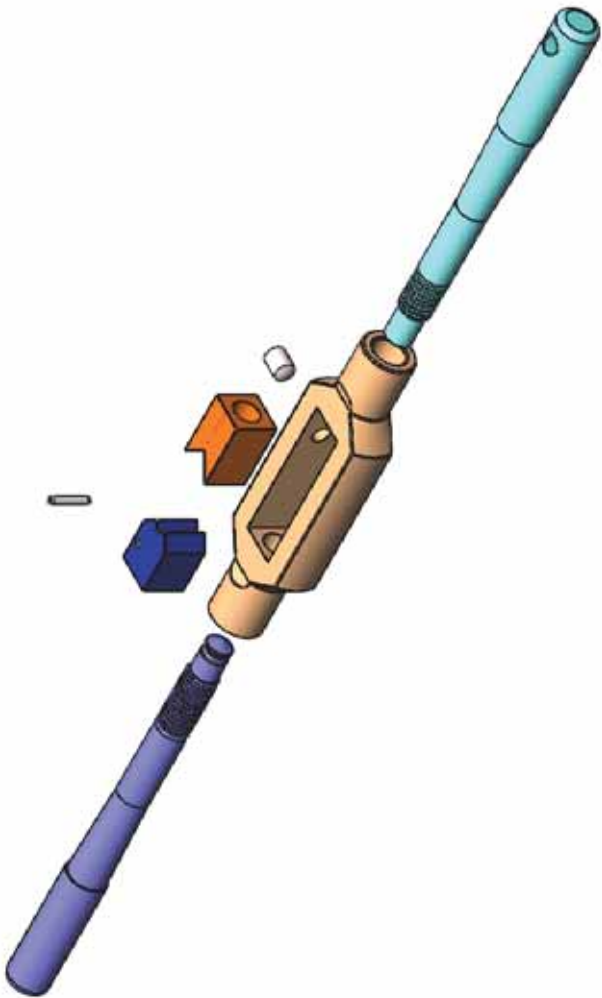


ADJUSTABLE TAP WRENCH



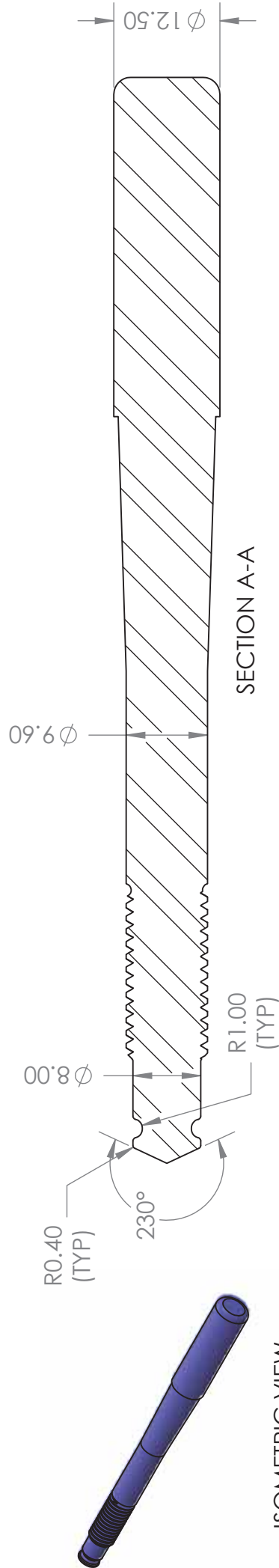
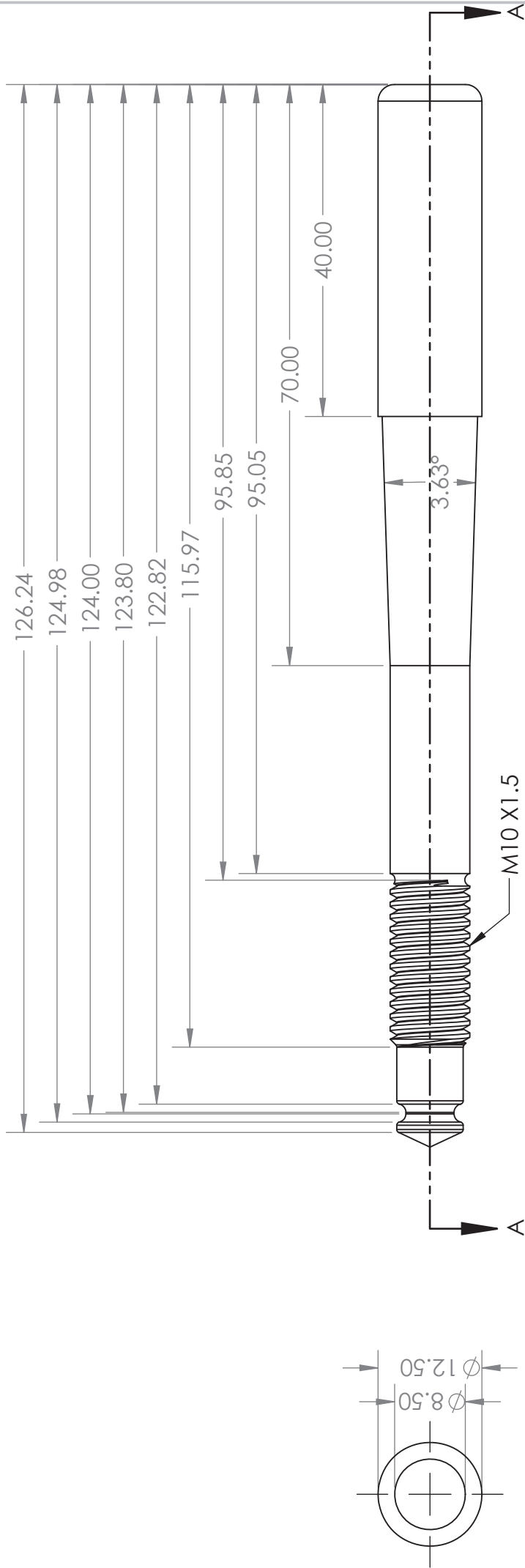


ASSEMBLED VIEW



EXPLODED VIEW





DESCRIPTION. Adjustable Handle

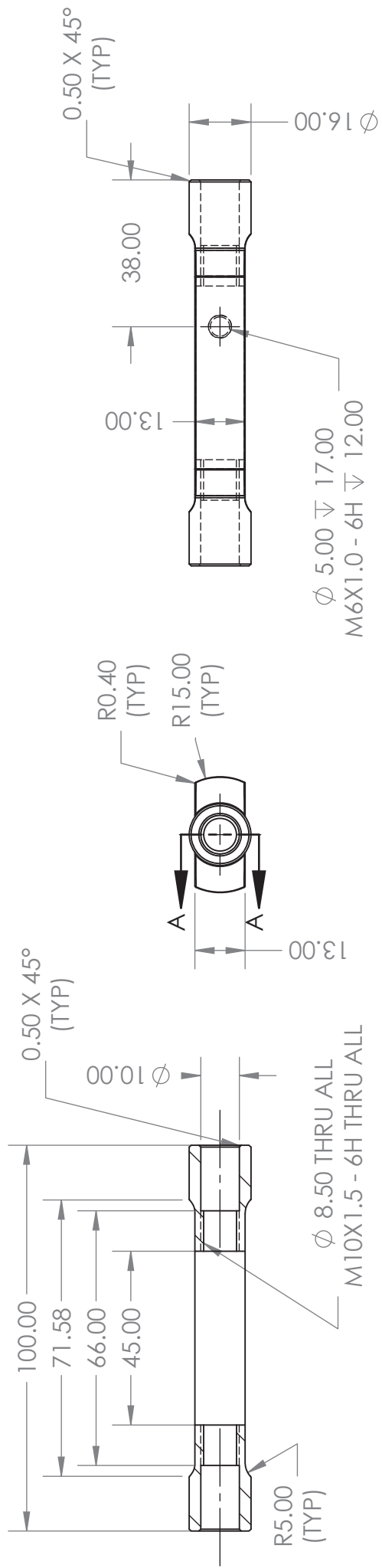
SHEET

1 OF 6

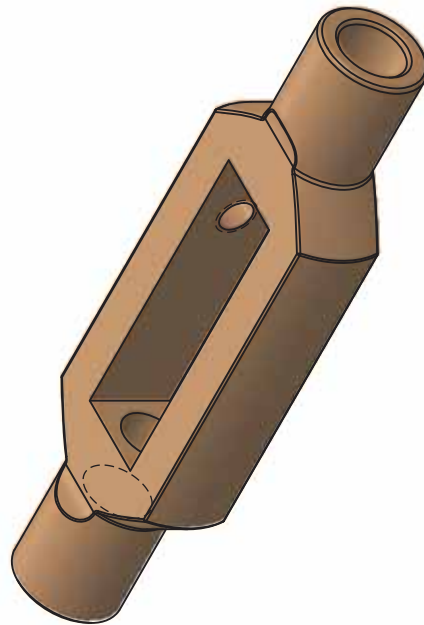
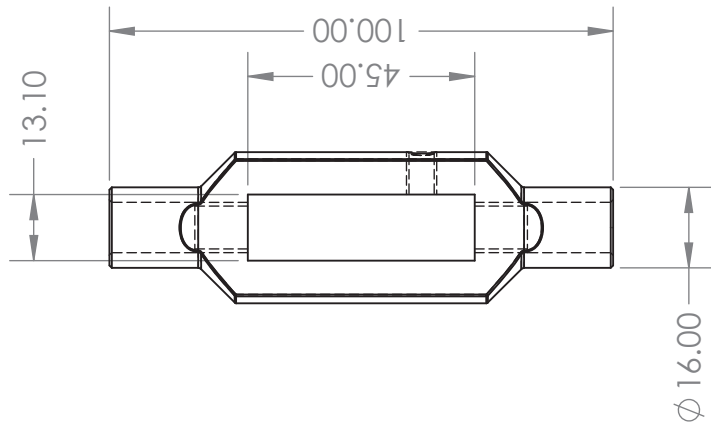
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

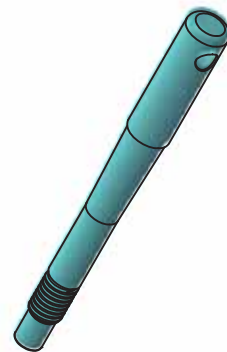
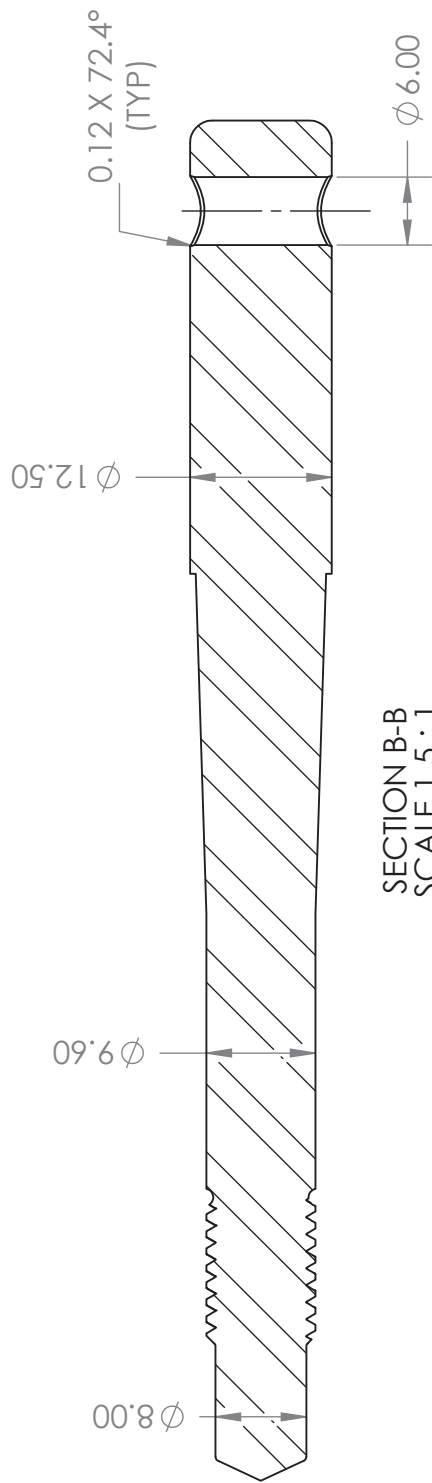
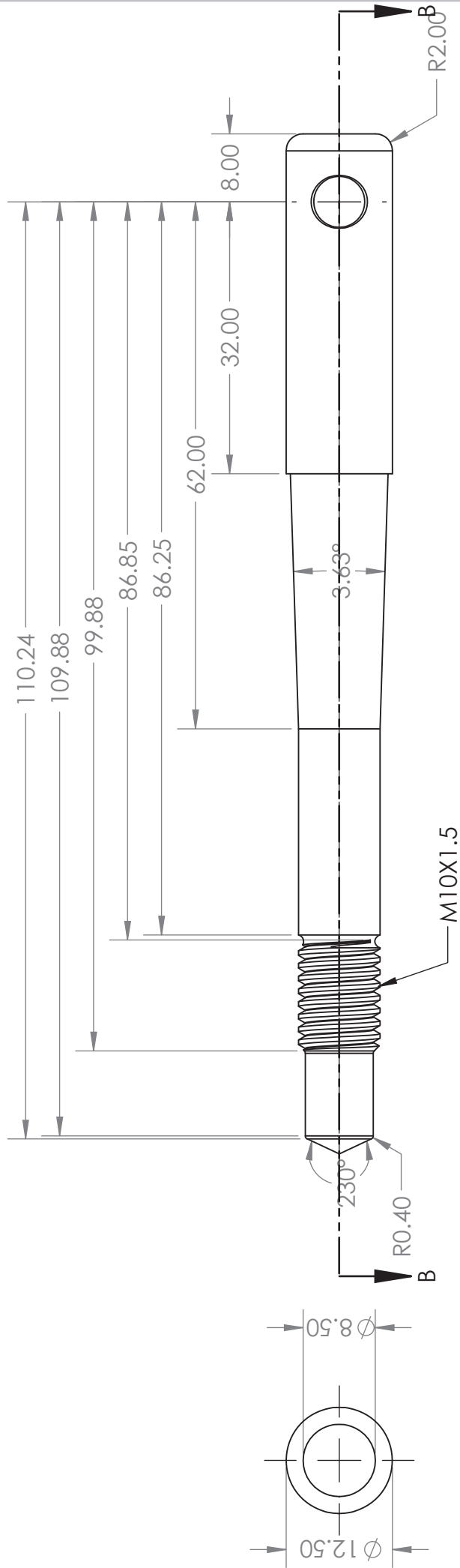


SECTION A-A



ISOMETRIC VIEW

DESCRIPTION.	Body	SHEET 2 OF 6	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
--------------	------	--------------	---------------------	--------------------------



ISOMETRIC VIEW

DESCRIPTION. Fixed Handle

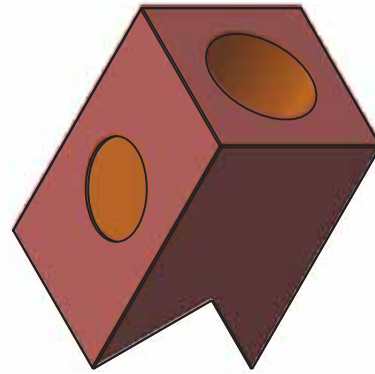
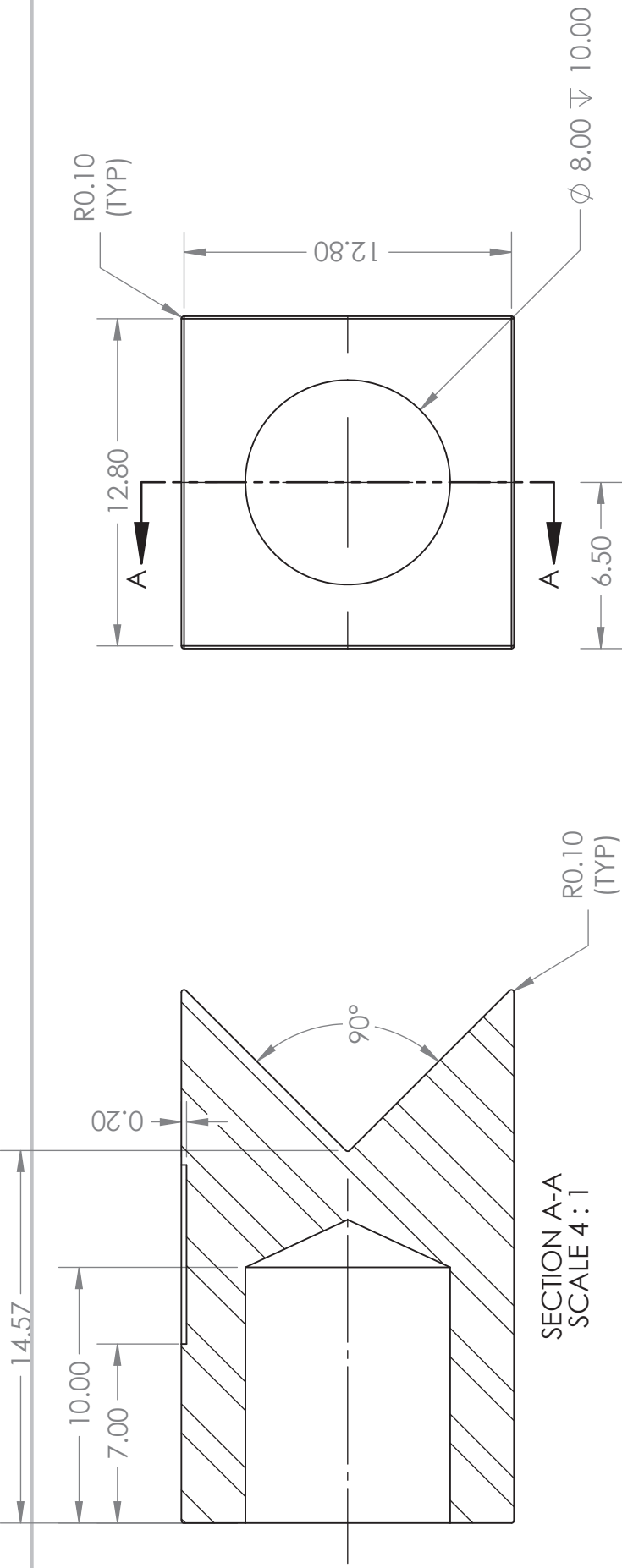
SHEET

3 OF 6

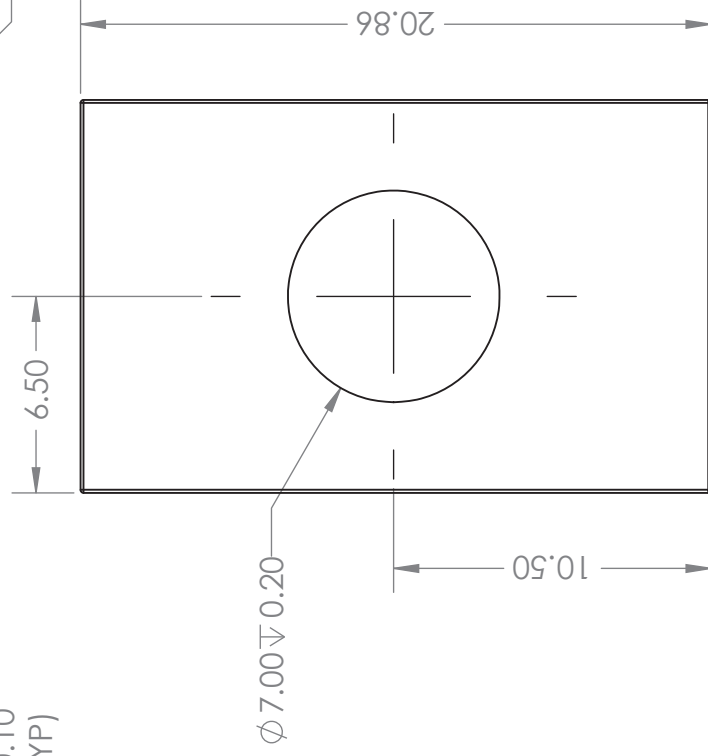
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



DESCRIPTION.

Fixed Jaw

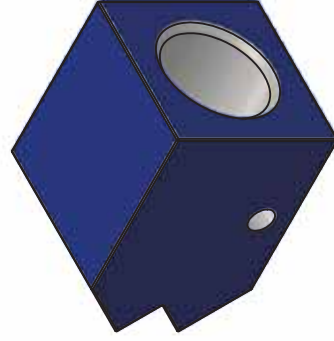
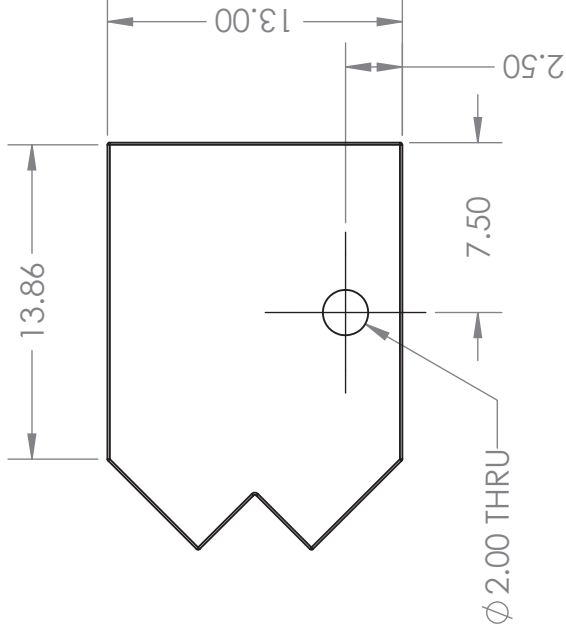
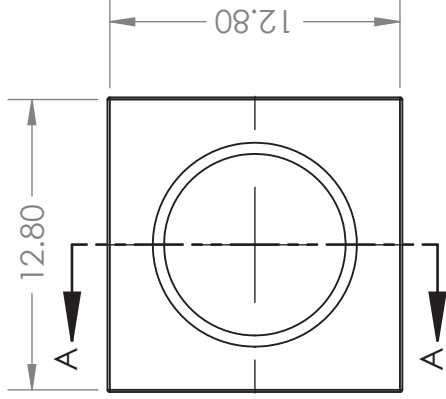
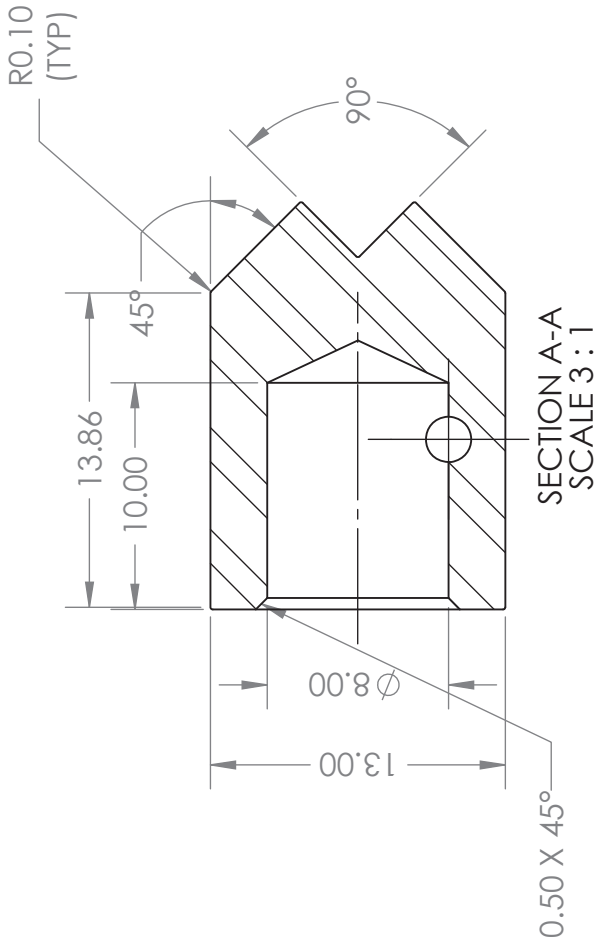
SHEET

4 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Movable Jaw

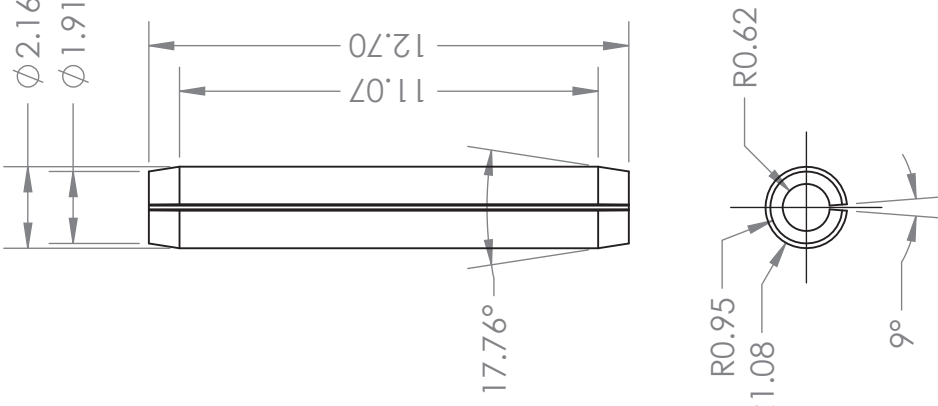
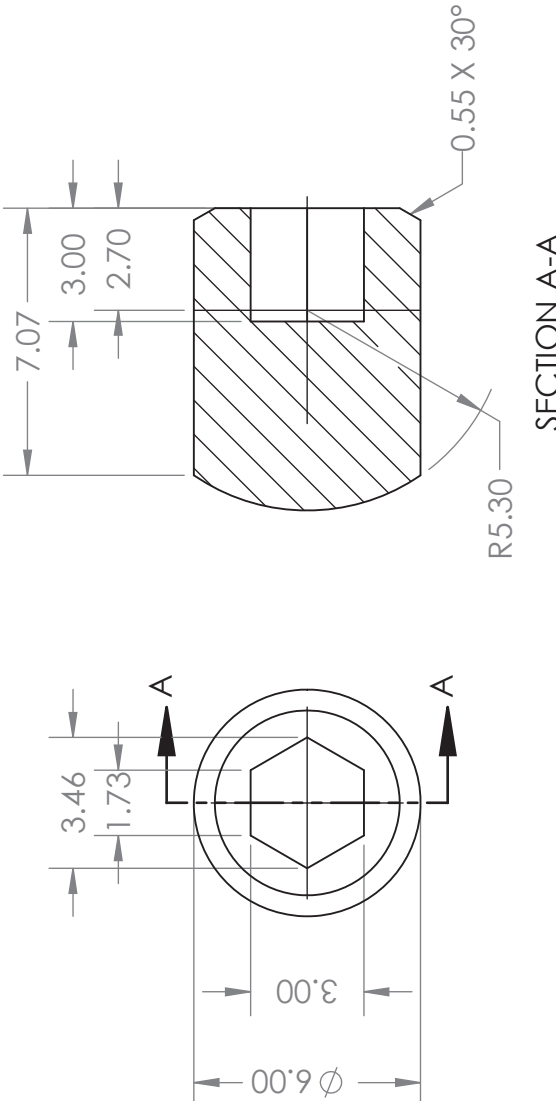
SHEET

5 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

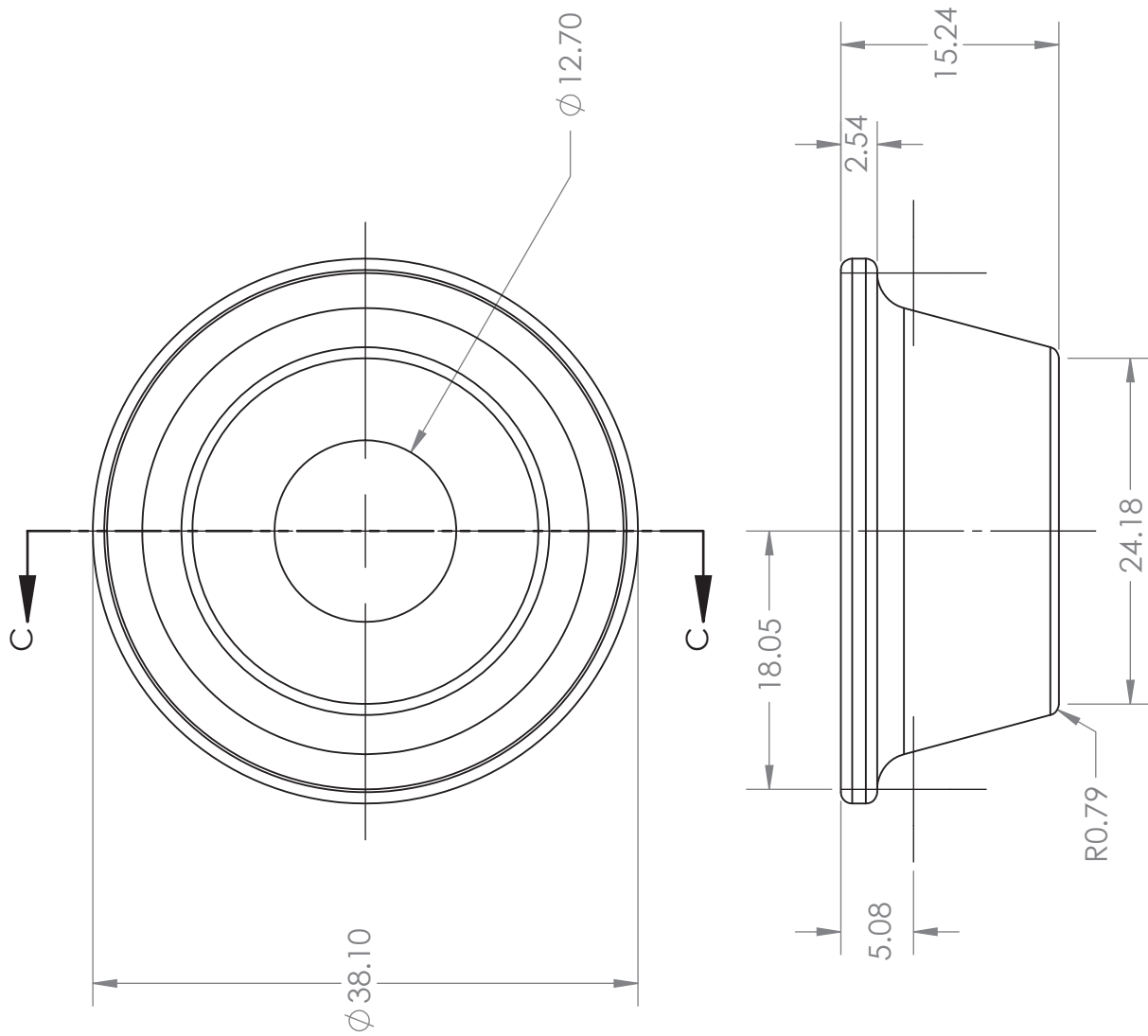
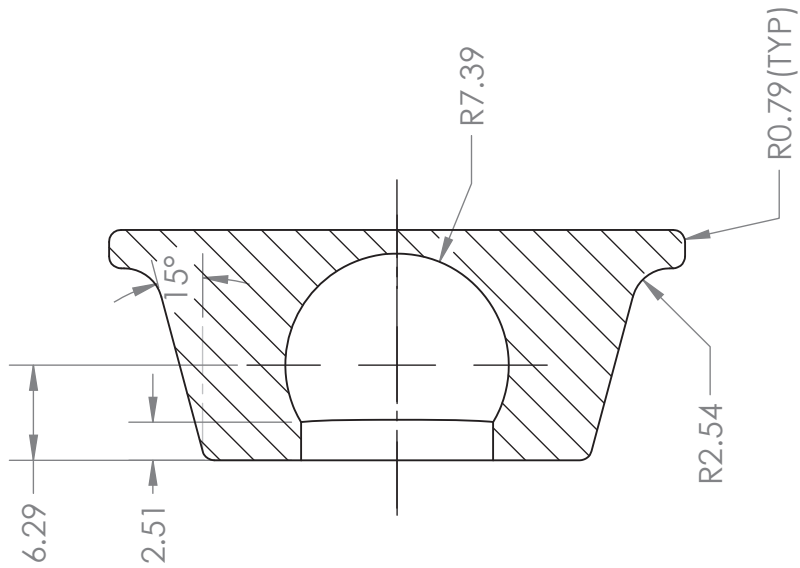
 ISOMETRIC VIEW 	 ISOMETRIC VIEW 
ALL DIMENSIONS ARE IN MM	DESCRIPTION. Set Screw & Split Pin
ANGLE OF PROJECTION	SHEET 6 OF 6

BEER BOTTLE



BESSEY CLAMP





SECTION C-C

DESCRIPTION. Swivel Clinch Plate

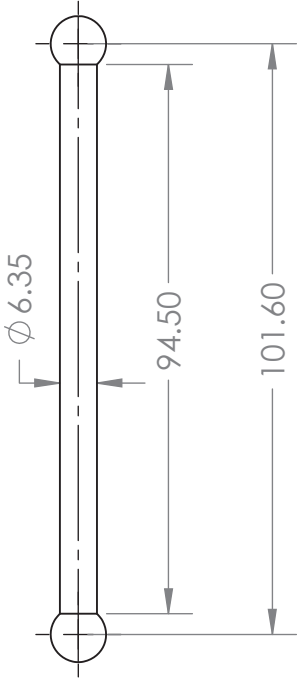
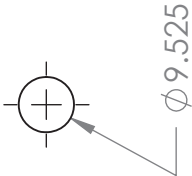
SHEET

1 OF 4

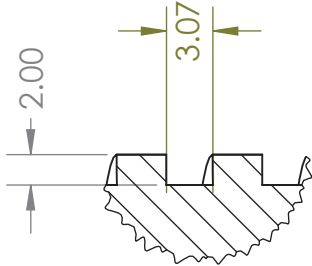
ANGLE OF PROJECTION



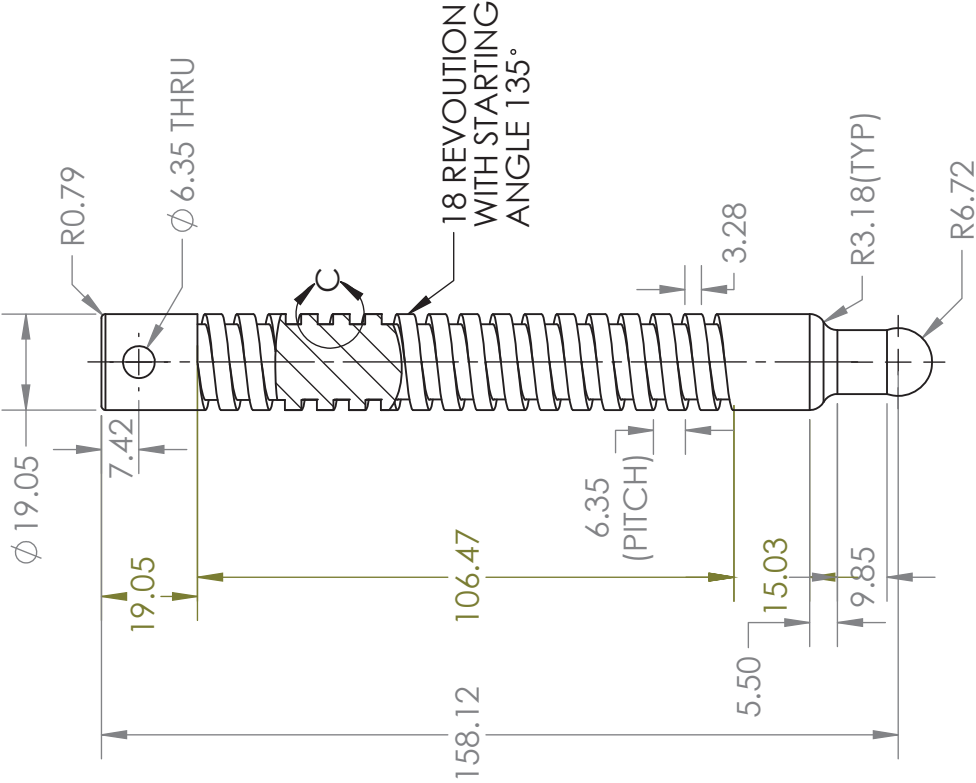
ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

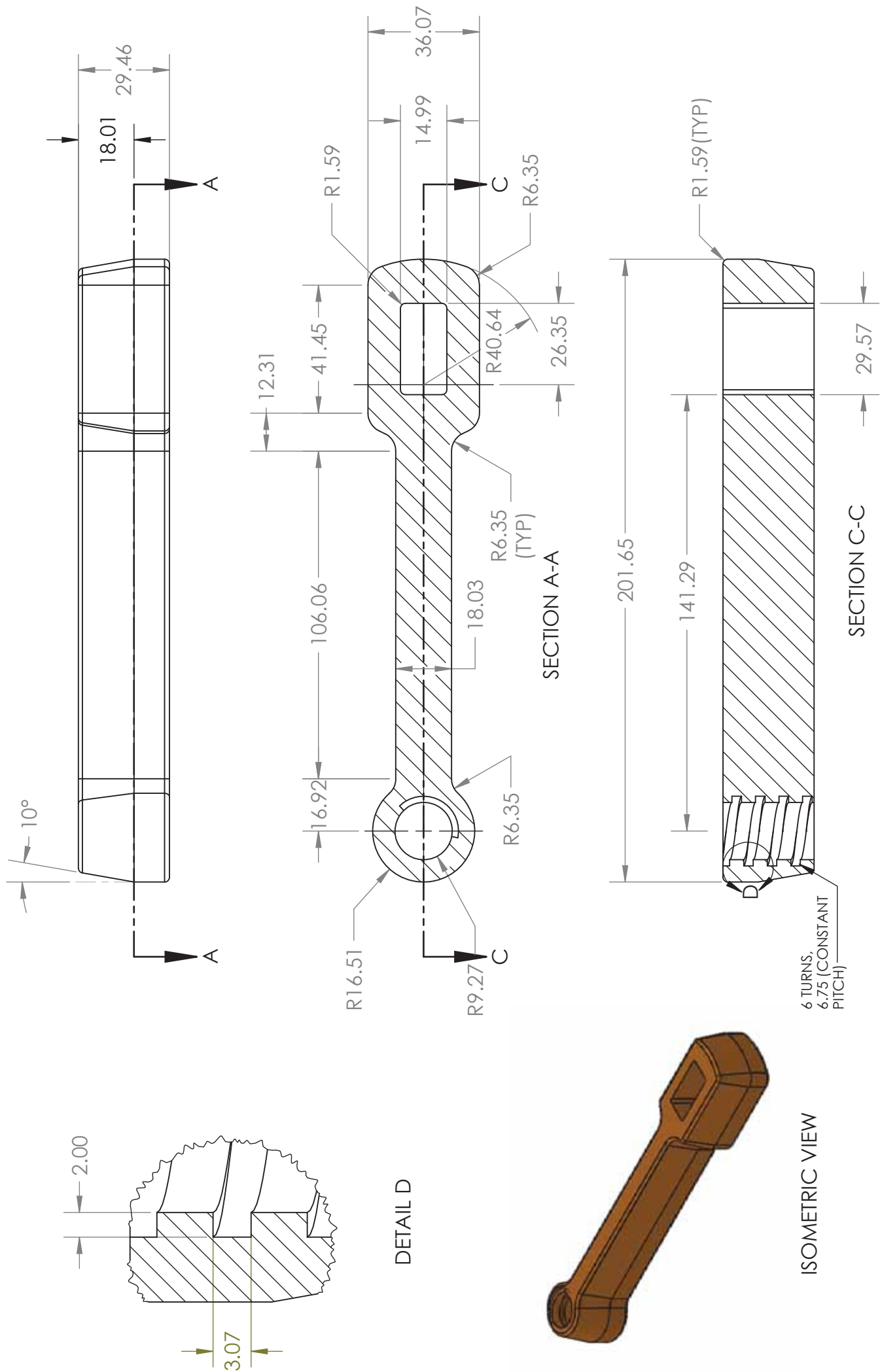


DETAIL C

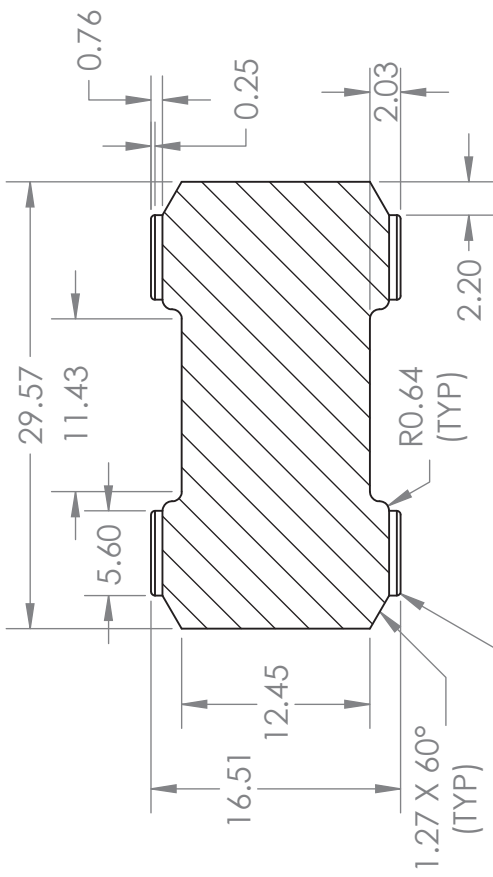


ISOMETRIC VIEW





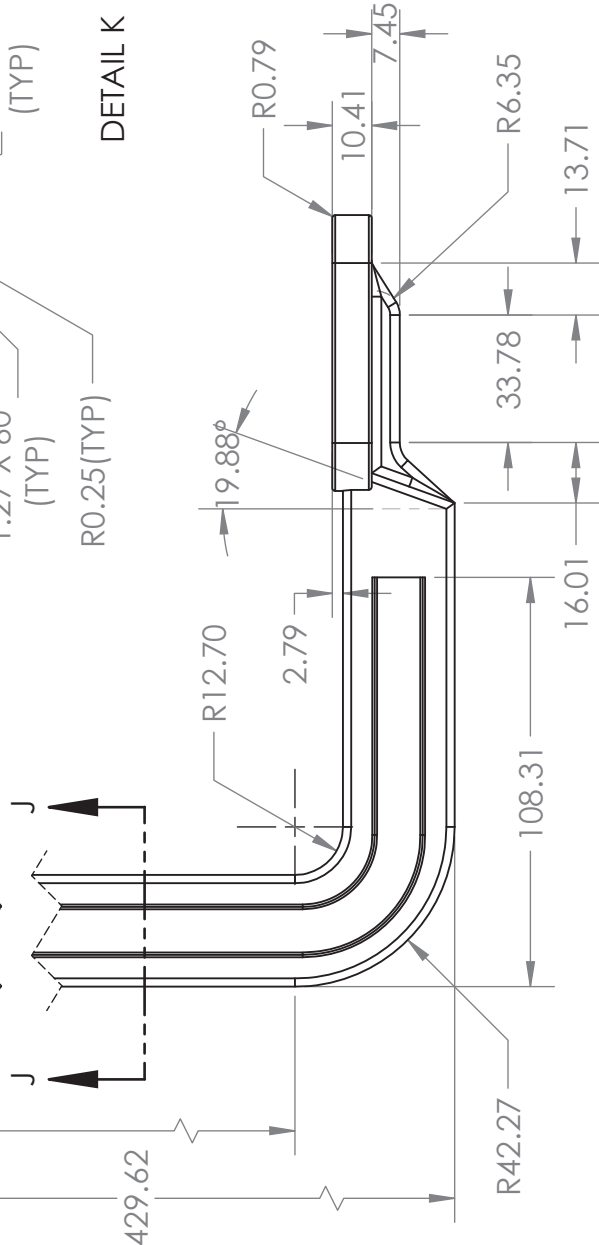
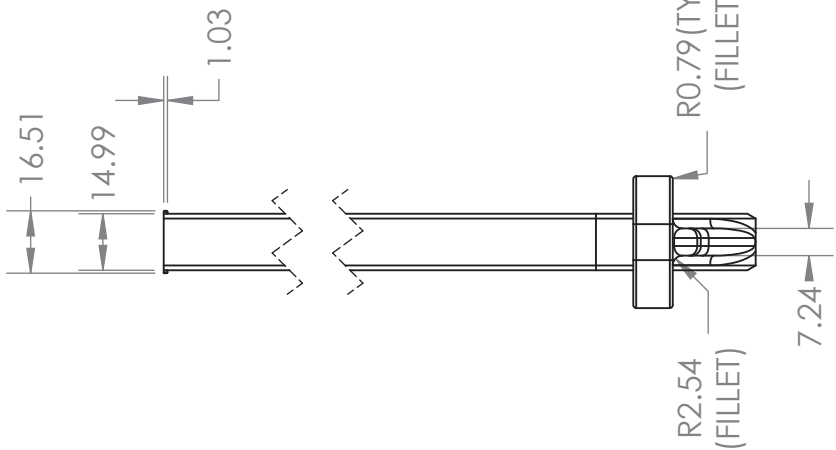
DESCRIPTION.	SLIDE CLAMP	SHEET	3 OF 4	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
--------------	-------------	-------	--------	---------------------	---	--------------------------



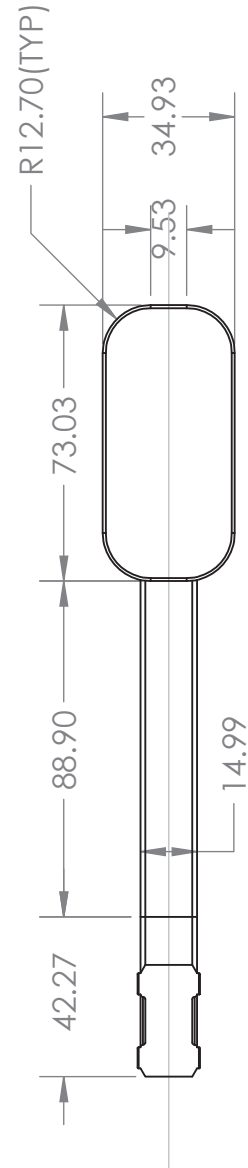
DETAIL K



SECTION J-J

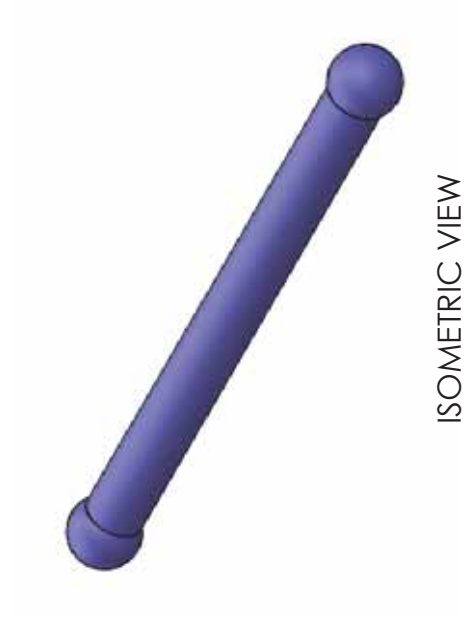
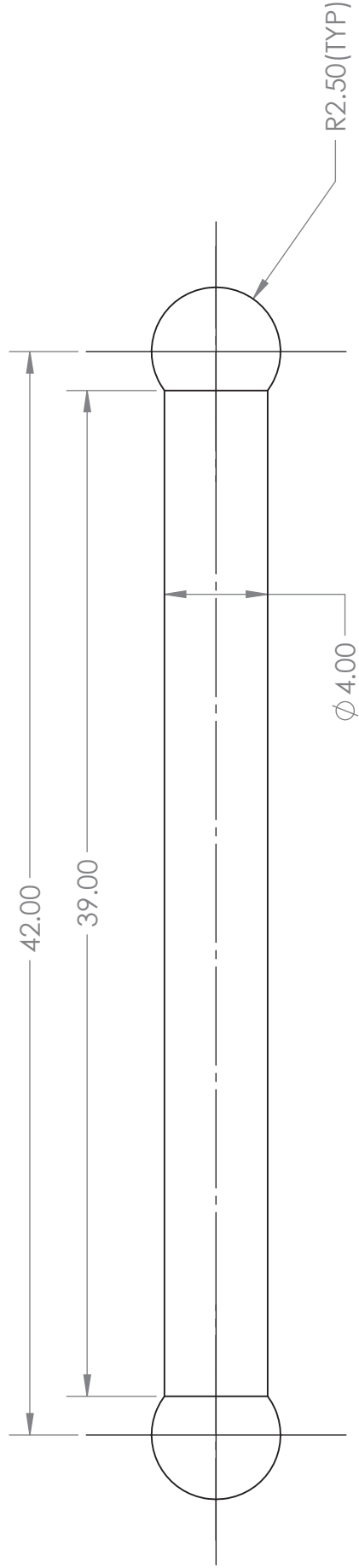


ISOMETRIC VIEW

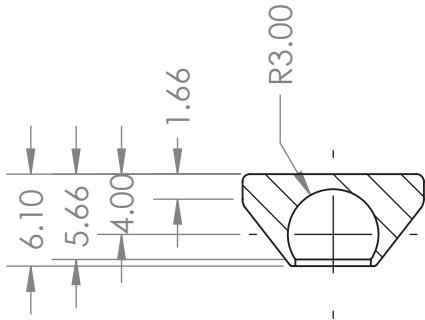


C CLAMP BIG

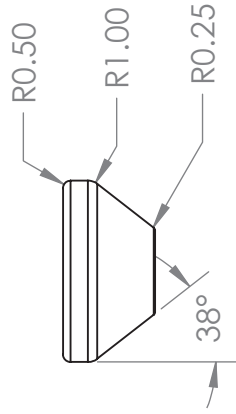
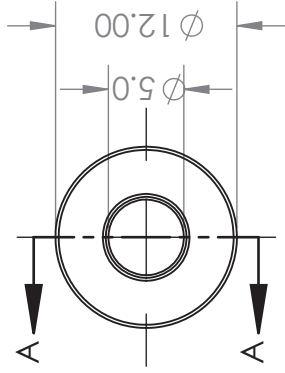




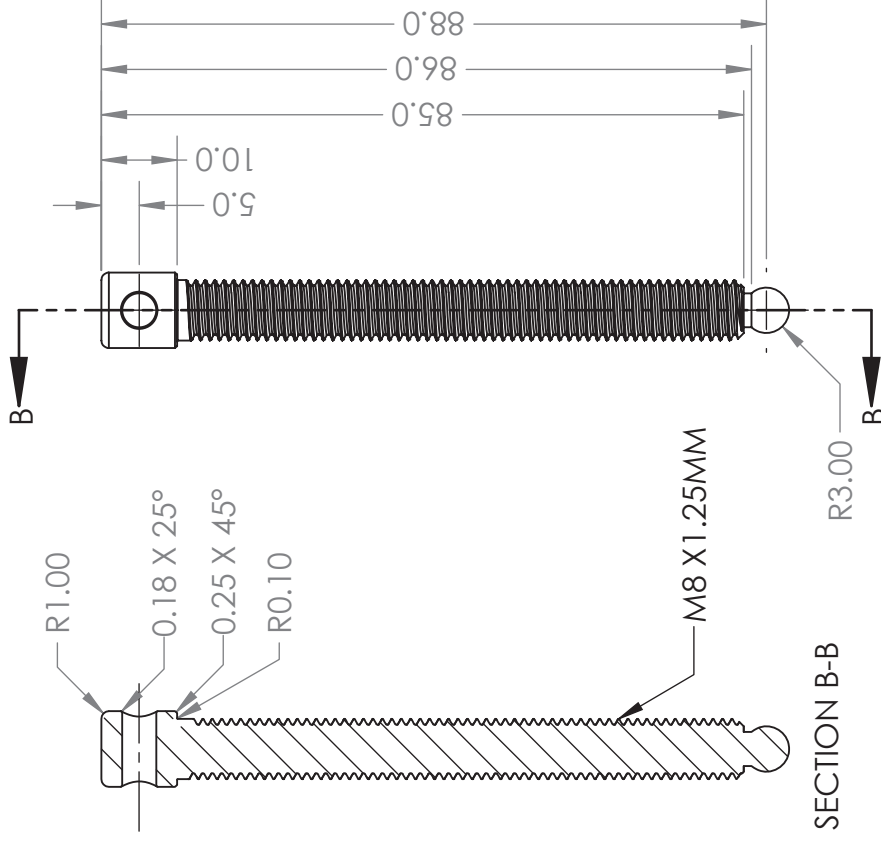
DESCRIPTION.	Tommy Bar	SHEET 1 OF 3	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
--------------	-----------	--------------	---------------------	---	--------------------------



SECTION A-A



ISOMETRIC VIEW



SECTION B-B



ISOMETRIC VIEW

DESCRIPTION. Clamp Head & Screw

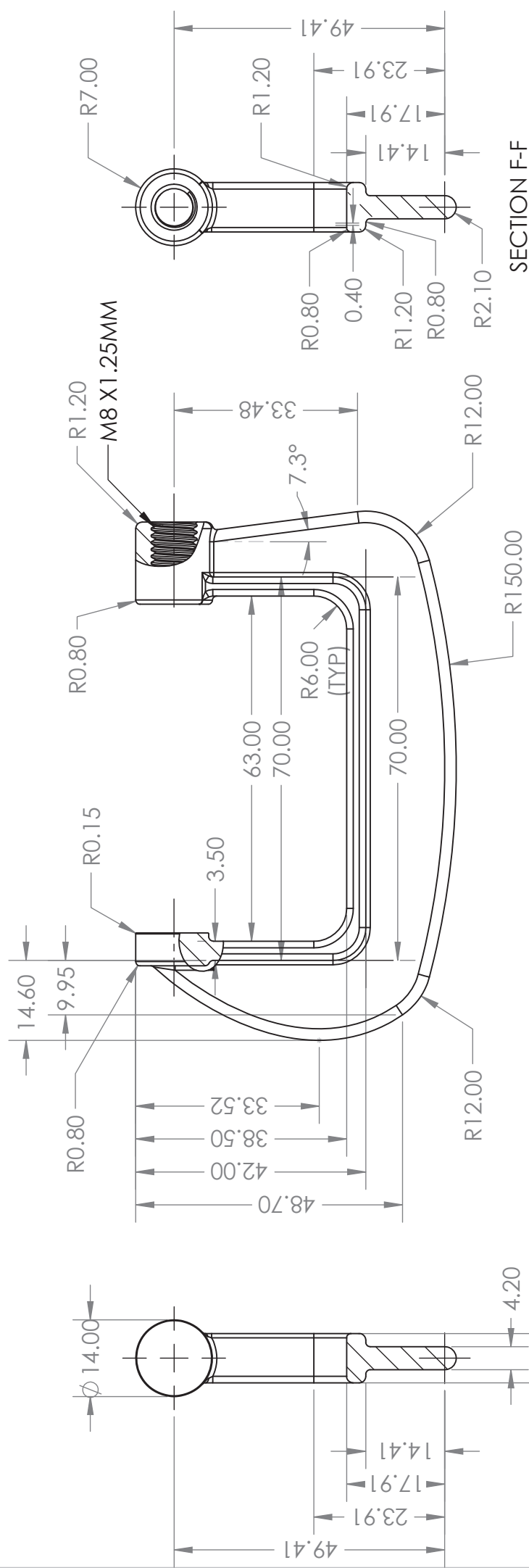
SHEET

2 OF 3

ANGLE OF PROJECTION

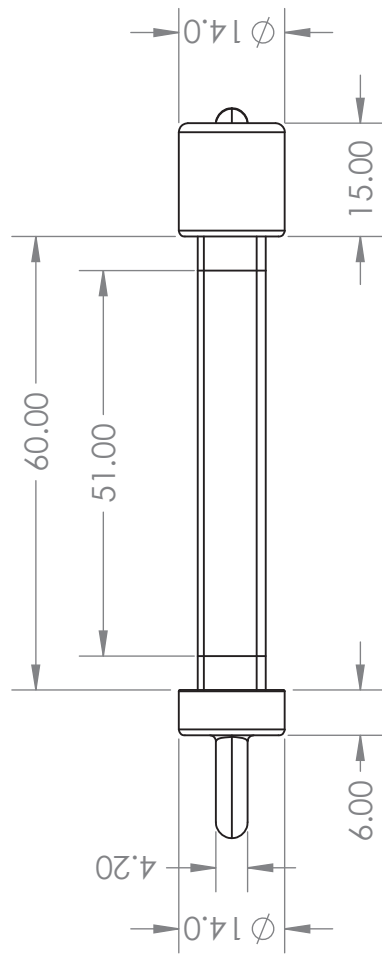


ALL DIMENSIONS ARE IN MM



SECTION E-E

SECTION F-F



ISOMETRIC VIEW

DESCRIPTION. G Clamp Frame

SHEET

3 OF 3

ANGLE OF PROJECTION



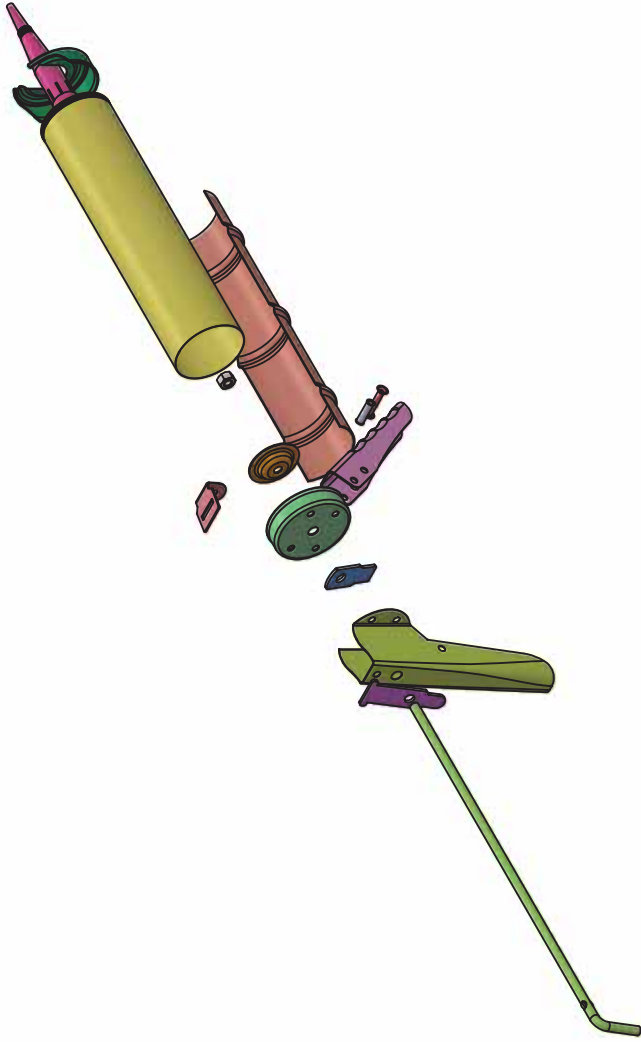
ALL DIMENSIONS ARE IN MM

CAUCKING GUN





ISOMETRIC VIEW



EXPLODED VIEW

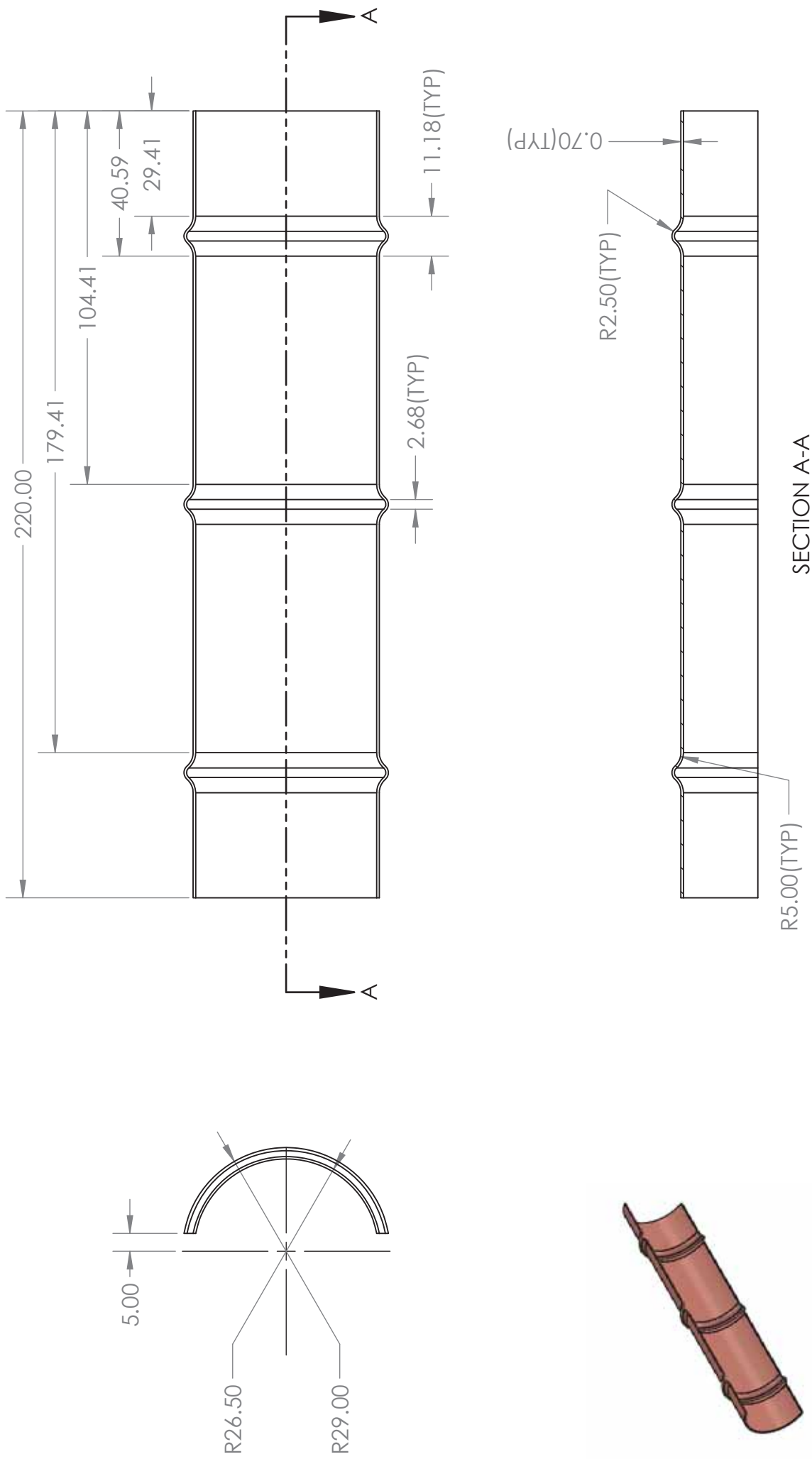
DESCRIPTION. Caulking Gun-EXPLODED

SHEET 1 OF 1

ANGLE OF PROJECTION



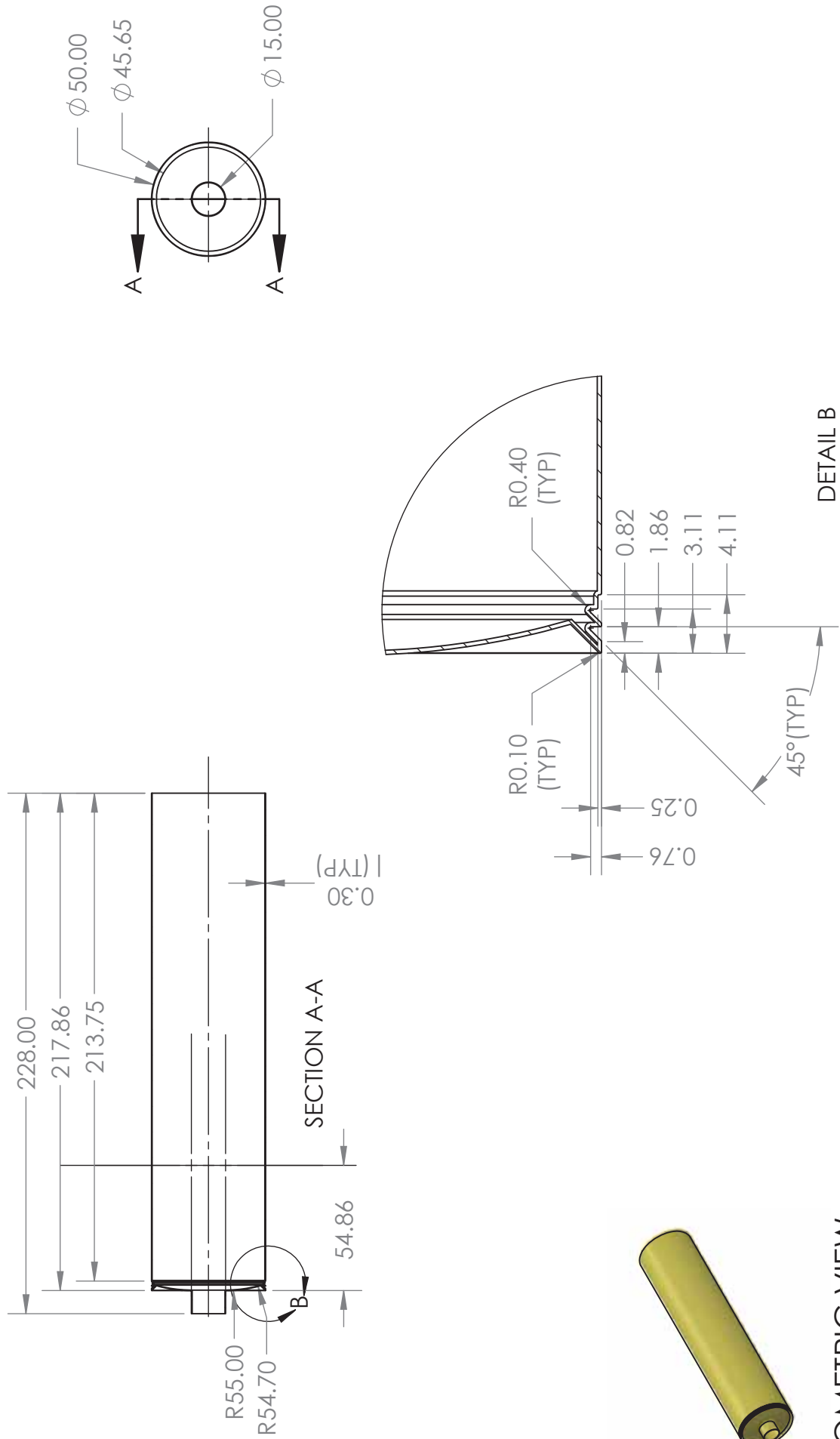
ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.	Base	SHEET 1 OF 9	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
--------------	------	--------------	---------------------	---	--------------------------

DESCRIPTION.	Cap & Plates	ISOMETRIC VIEW		ISOMETRIC VIEW		ISOMETRIC VIEW	
35							
Orthographic drawing of a cap plate. Top view shows a circle with four holes (Ø 5.00 THRU(TYP)) and a central hole (Ø 7.50 THRU). Dimensions: 32.00, 20.00, 13.50, 11.50, 3.00, R0.50, R5.00, R2.00, 1.00. Section A-A shows a cross-section with dimensions: 32.50, 27.50, 25.50, R2.00, 1.00, R5.00, R0.50.		Orthographic drawing of an L-shaped bracket. Front view shows a profile with dimensions: 18.00, 14.00, 11.68, 18.04, 28.00, R1.00 (TYP), R19.96, 145°, 38.00, 2.00. Top view shows a circle with a hole (Ø 7.50 THRU) and dimensions: 54.00, 42.09, 33.00, 4.50, 22.50, R1.50 (TYP), R0.50, Ø 7.00 THRU, R1.00 (TYP), R5.50, 16.00, 8.59, 135°, 59.50, 2.00.		Orthographic drawing of an L-shaped bracket. Front view shows a profile with dimensions: 54.00, 42.09, 33.00, 4.50, 22.50, R1.50 (TYP), R0.50, Ø 7.00 THRU, R1.00 (TYP), R5.50, 16.00, 8.59, 135°, 59.50, 2.00. Top view shows a circle with a hole (Ø 7.50 THRU) and dimensions: 18.00, 14.00, 11.68, 18.04, 28.00, R1.00 (TYP), R19.96, 145°, 38.00, 2.00.		Orthographic drawing of an L-shaped bracket. Front view shows a profile with dimensions: 54.00, 42.09, 33.00, 4.50, 22.50, R1.50 (TYP), R0.50, Ø 7.00 THRU, R1.00 (TYP), R5.50, 16.00, 8.59, 135°, 59.50, 2.00. Top view shows a circle with a hole (Ø 7.50 THRU) and dimensions: 18.00, 14.00, 11.68, 18.04, 28.00, R1.00 (TYP), R19.96, 145°, 38.00, 2.00.	
ALL DIMENSIONS ARE IN MM		SHEET 3 OF 9		ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM	



ISOMETRIC VIEW

ALL DIMENSIONS ARE IN MM

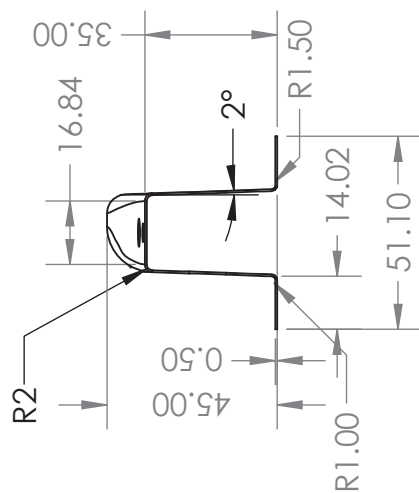
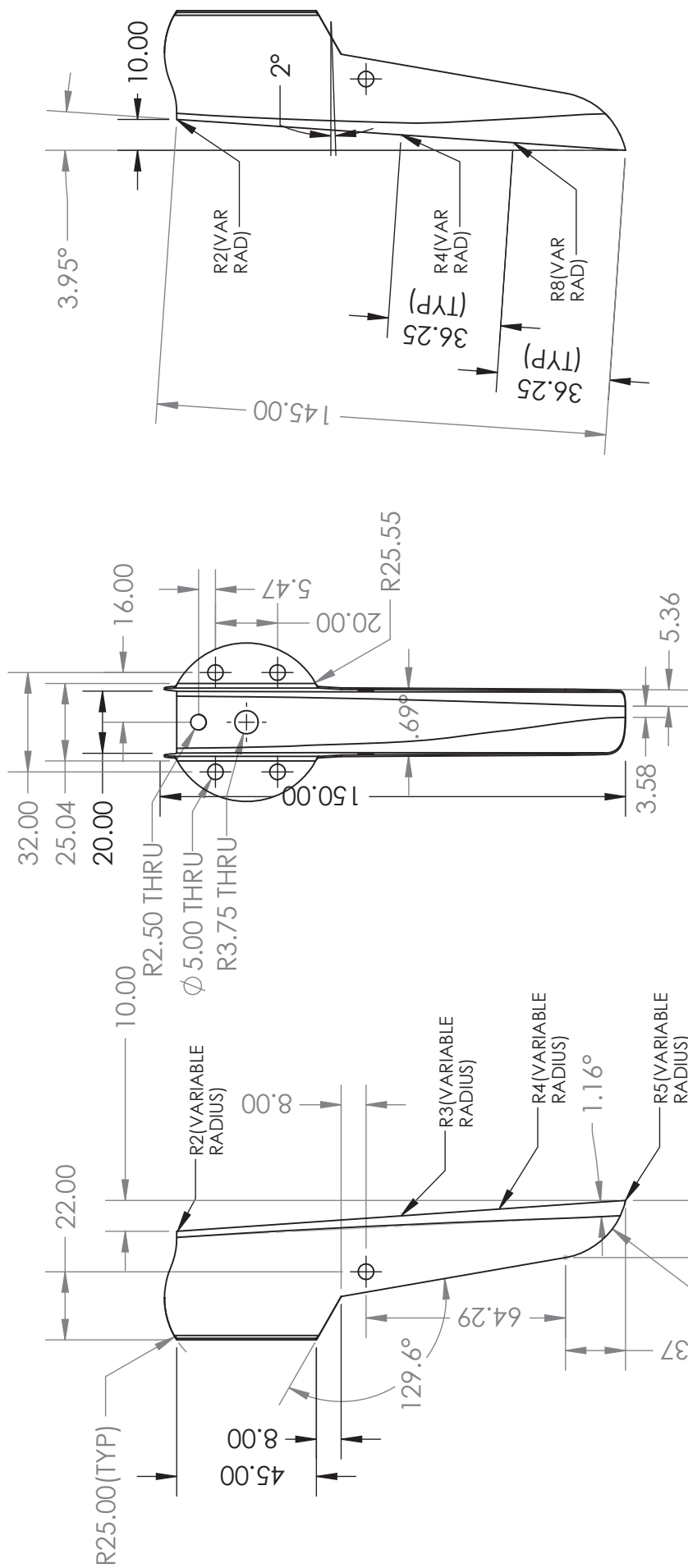


ANGLE OF PROJECTION

SHEET 2 OF 9

Cartridge

DESCRIPTION.



ISOMETRIC VIEW

DESCRIPTION.

Handle

SHEET 6 OF 9

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

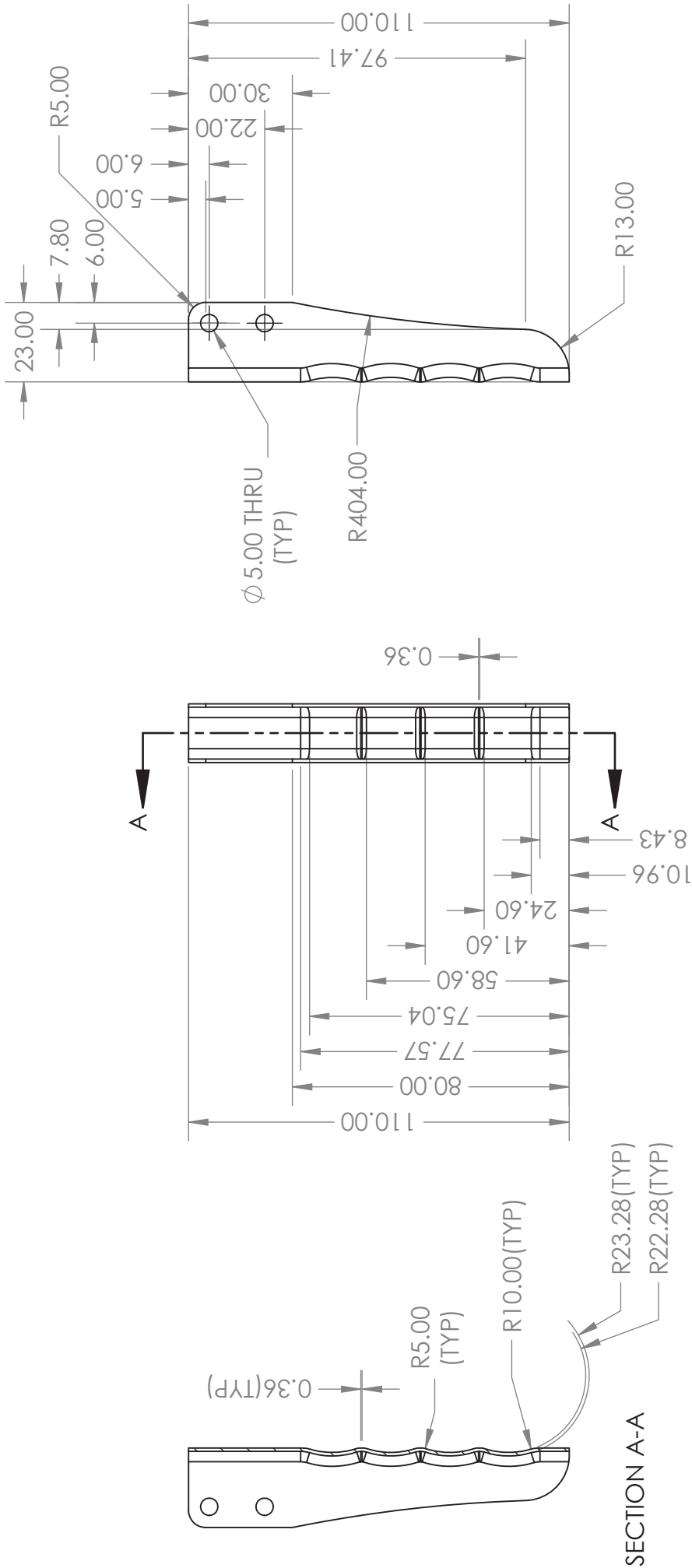
Leaver

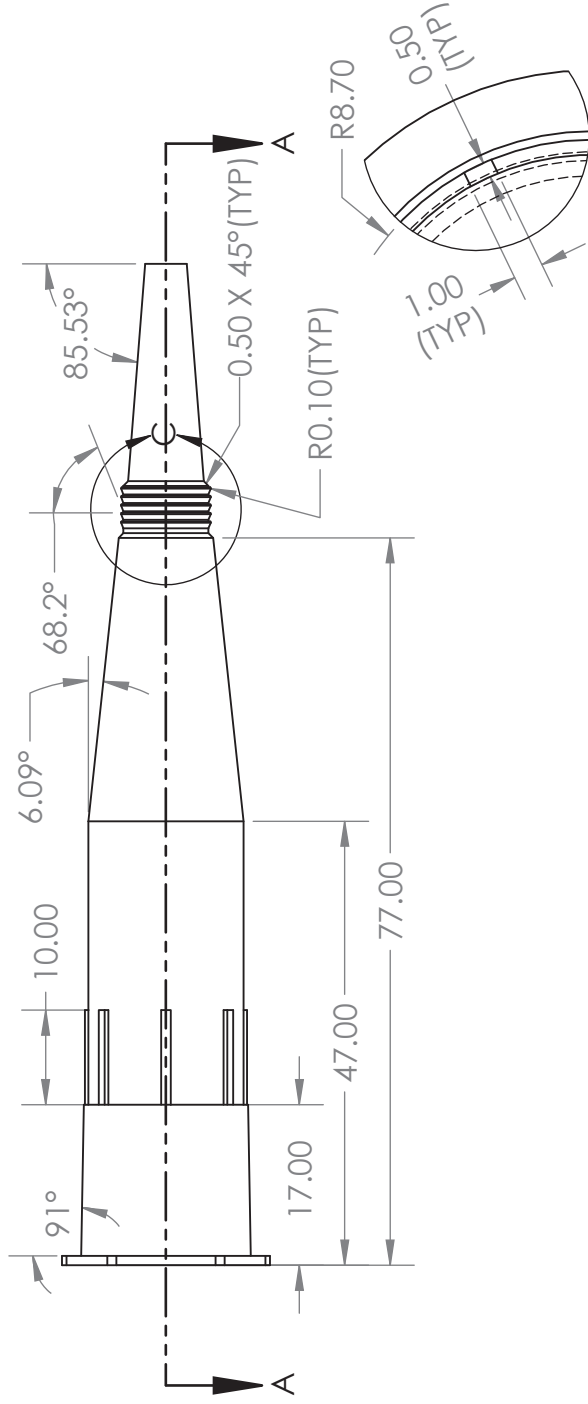
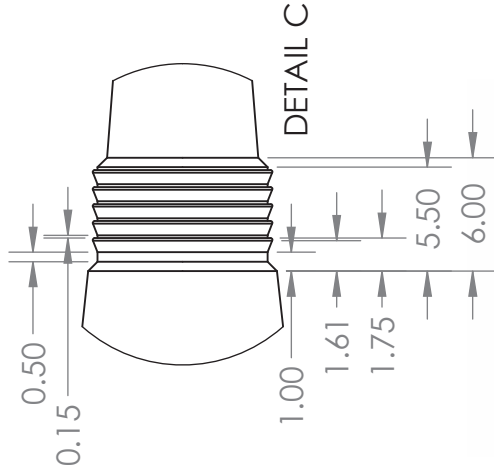
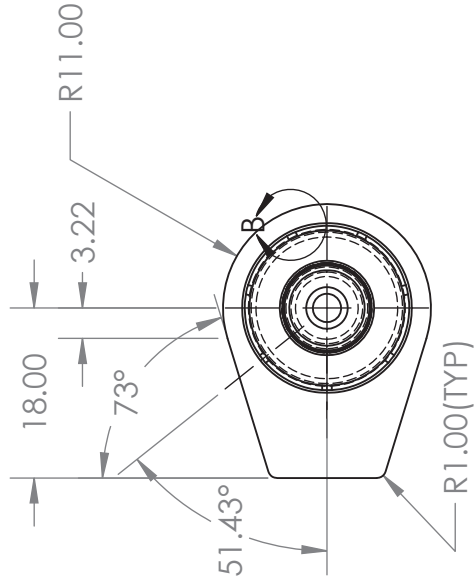
SHEET 4 OF 9

ANGLE OF PROJECTION

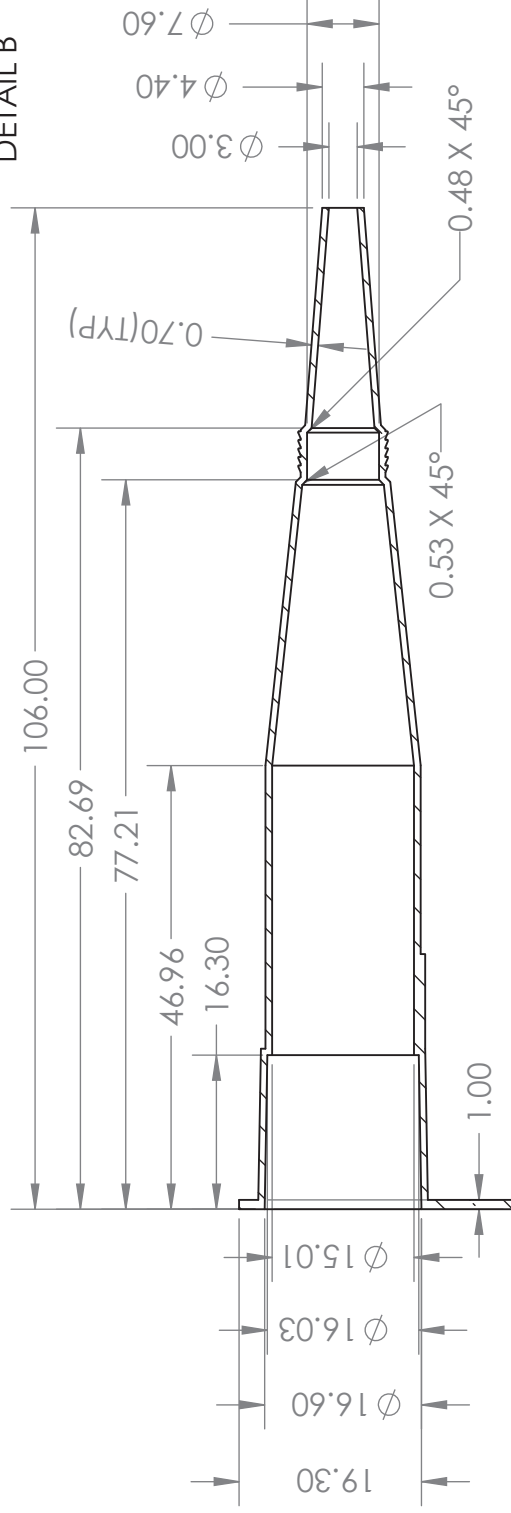


ALL DIMENSIONS ARE IN MM

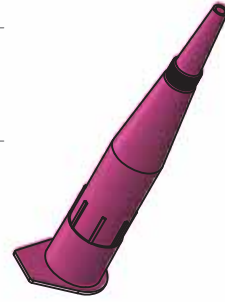




DETAIL B



ISOMETRIC VIEW



SECTION A-A

DESCRIPTION.

Nozzle

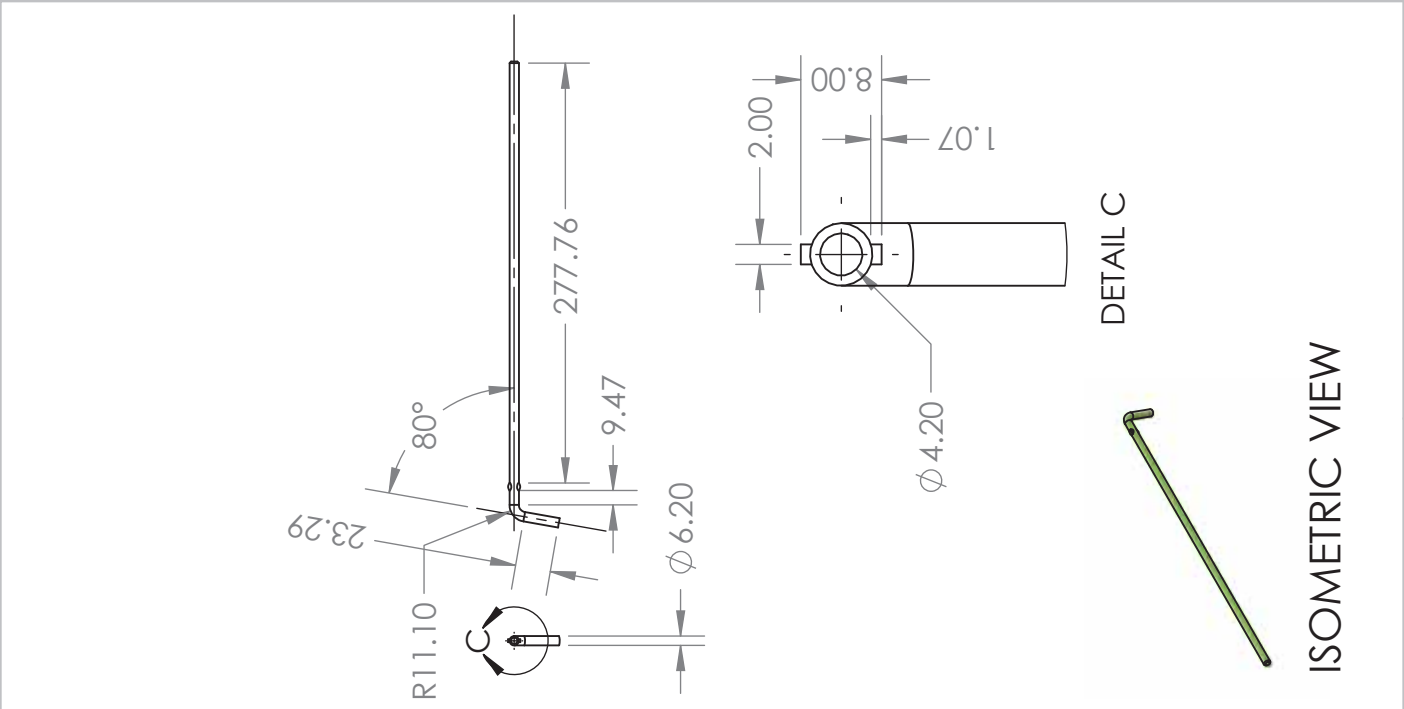
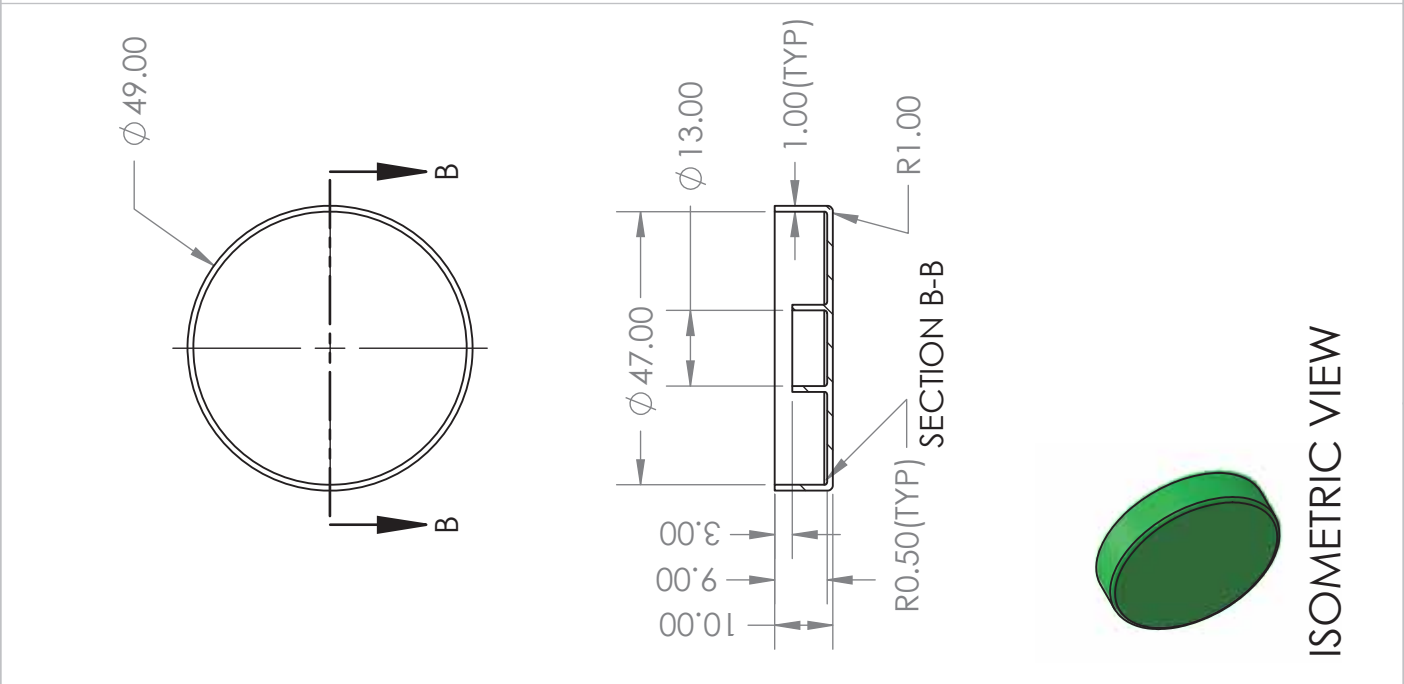
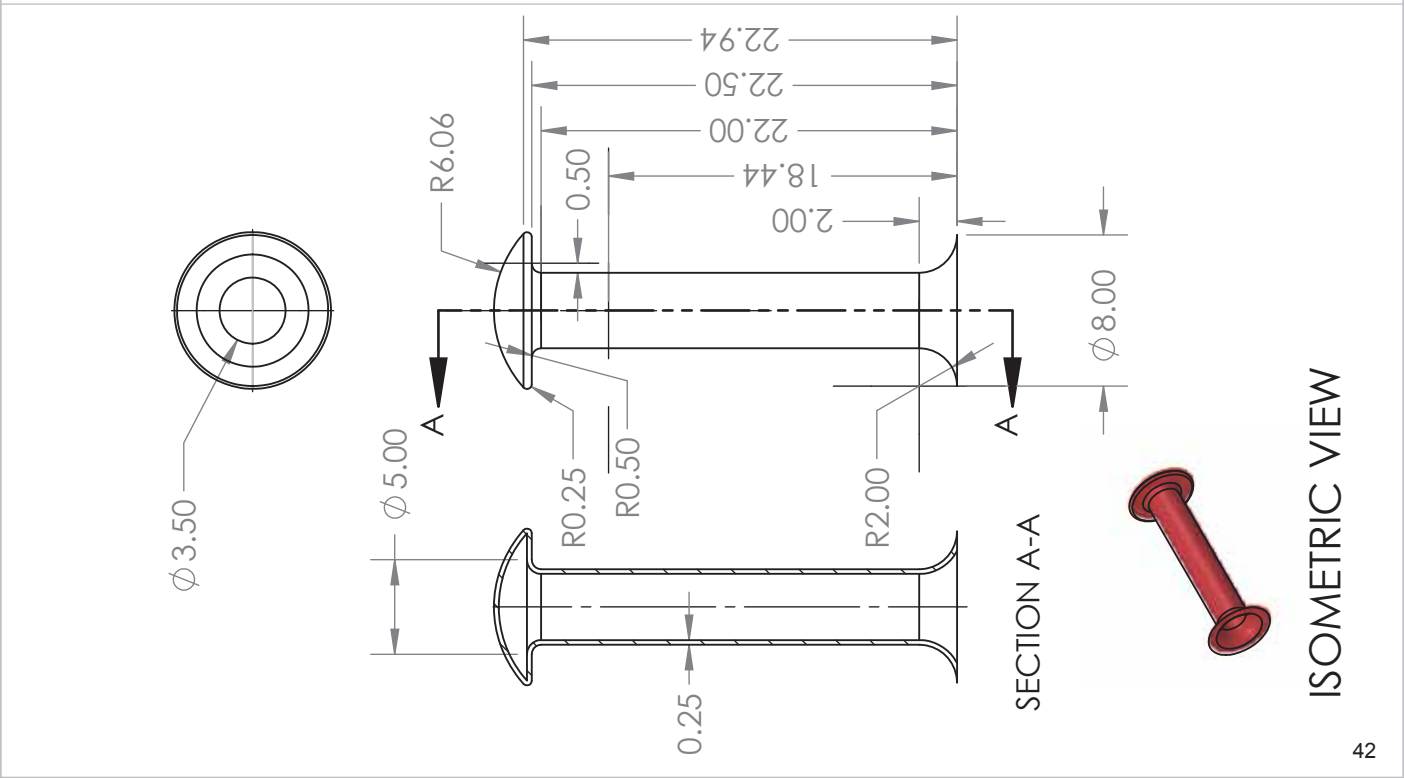
SHEET 7 OF 9

ANGLE OF PROJECTION



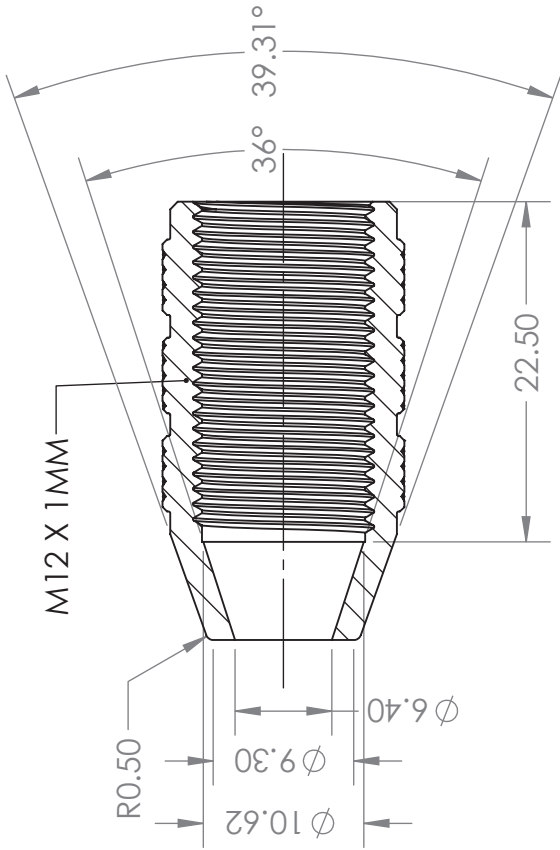
ALL DIMENSIONS ARE IN MM

ISOMETRIC VIEW	ISOMETRIC VIEW	SECTION B-B ISOMETRIC VIEW	DESCRIPTION. Piston & End Cap	SHEET 8 OF 9	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
--	---	---	--	---	--	--

 Technical drawing of a bent rod. The main view shows a rod bent at an 80° angle. Dimensions include a radius of R11.10, a distance of 23.29 from the end to the bend, a bend radius of 9.47, a total length of 277.76, and a diameter of 4.20. A detail C shows a cross-section of the rod with dimensions 2.00, 8.00, and 1.07.	 Technical drawing of a cylindrical part. The main view shows a cylinder with a diameter of 49.00. Section A-A shows a cross-section with dimensions 47.00, 13.00, 1.00(TYP), R1.00, R0.50(TYP), 10.00, 9.00, and 3.00. Section B-B shows a cross-section with dimensions 47.00, 13.00, 1.00(TYP), R1.00, R0.50(TYP), 10.00, 9.00, and 3.00. An isometric view is also shown.	 Technical drawing of a rivet. The main view shows a rivet with a head diameter of 3.50 and a shank diameter of 5.00. Section A-A shows a cross-section with dimensions R0.25, R0.50, R2.00, 0.25, 2.00, 18.44, 22.00, 22.50, and 22.94. An isometric view is also shown.
ISOMETRIC VIEW	ISOMETRIC VIEW	ISOMETRIC VIEW
ALL DIMENSIONS ARE IN MM	ANGLE OF PROJECTION	DESCRIPTION. Rivet, Cap & Rod
SHEET 9 OF 9	42	

EXTENSION TAP WRENCH

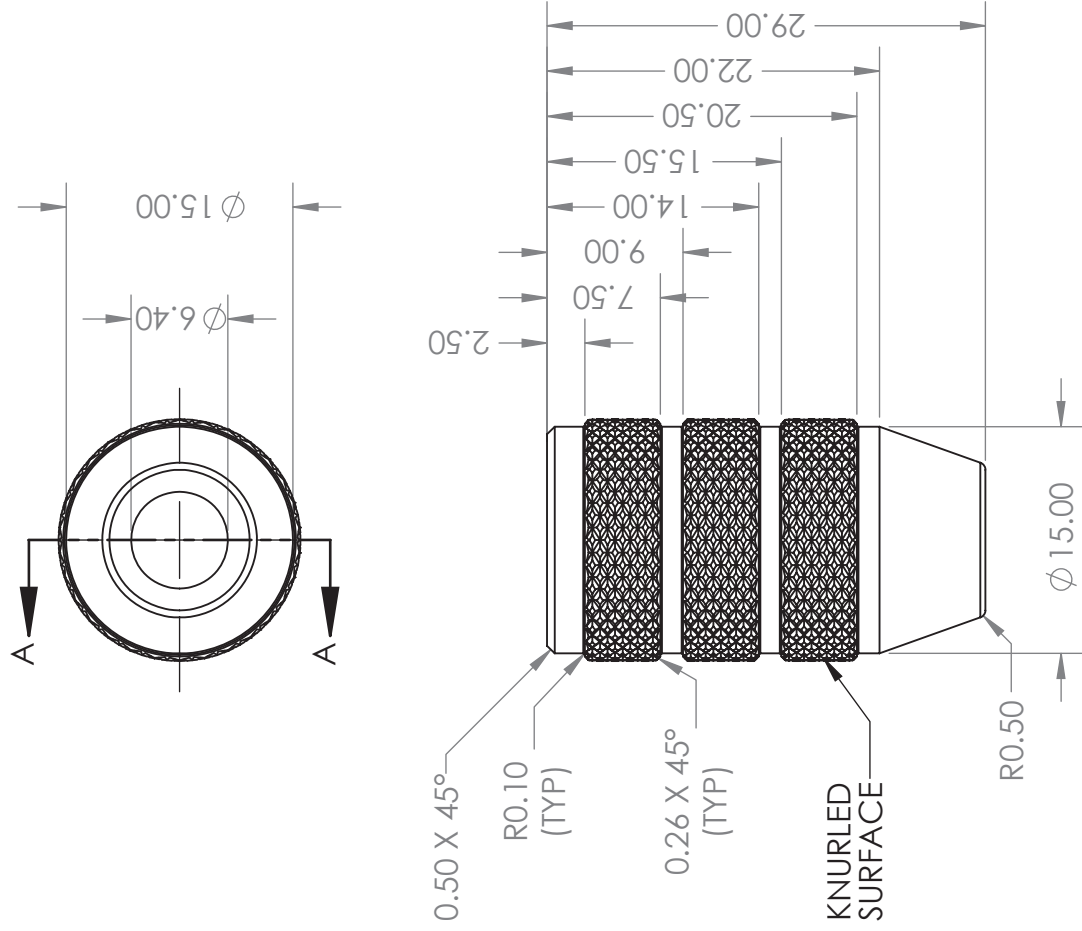




SECTION A-A



ISOMETRIC VIEW



DESCRIPTION. Wrench Locking Cap

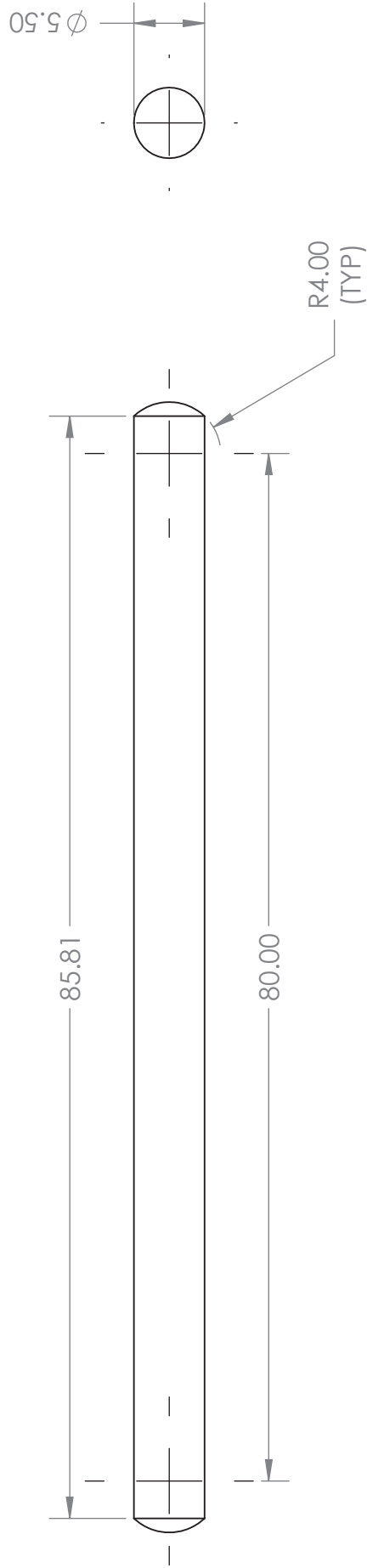
SHEET

2 OF 41

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Wrench Bar

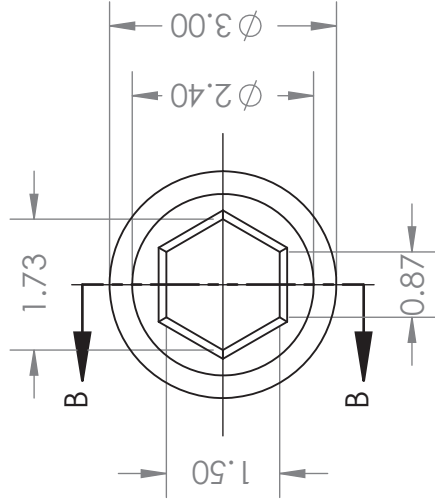
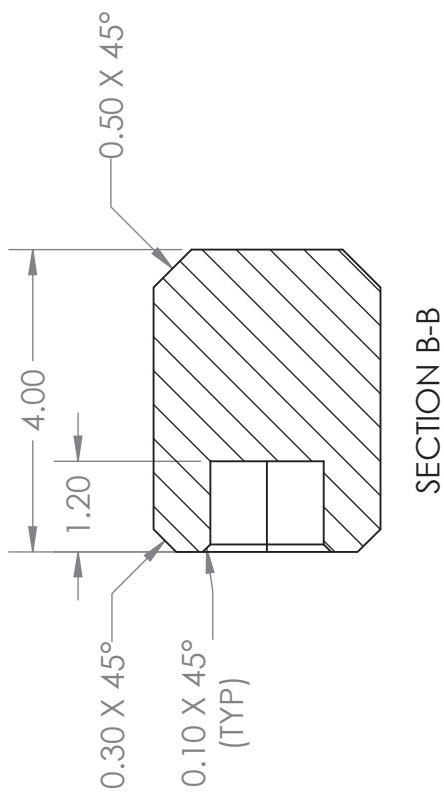
SHEET

3 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION. M3x4 Set Screw

SHEET

4 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

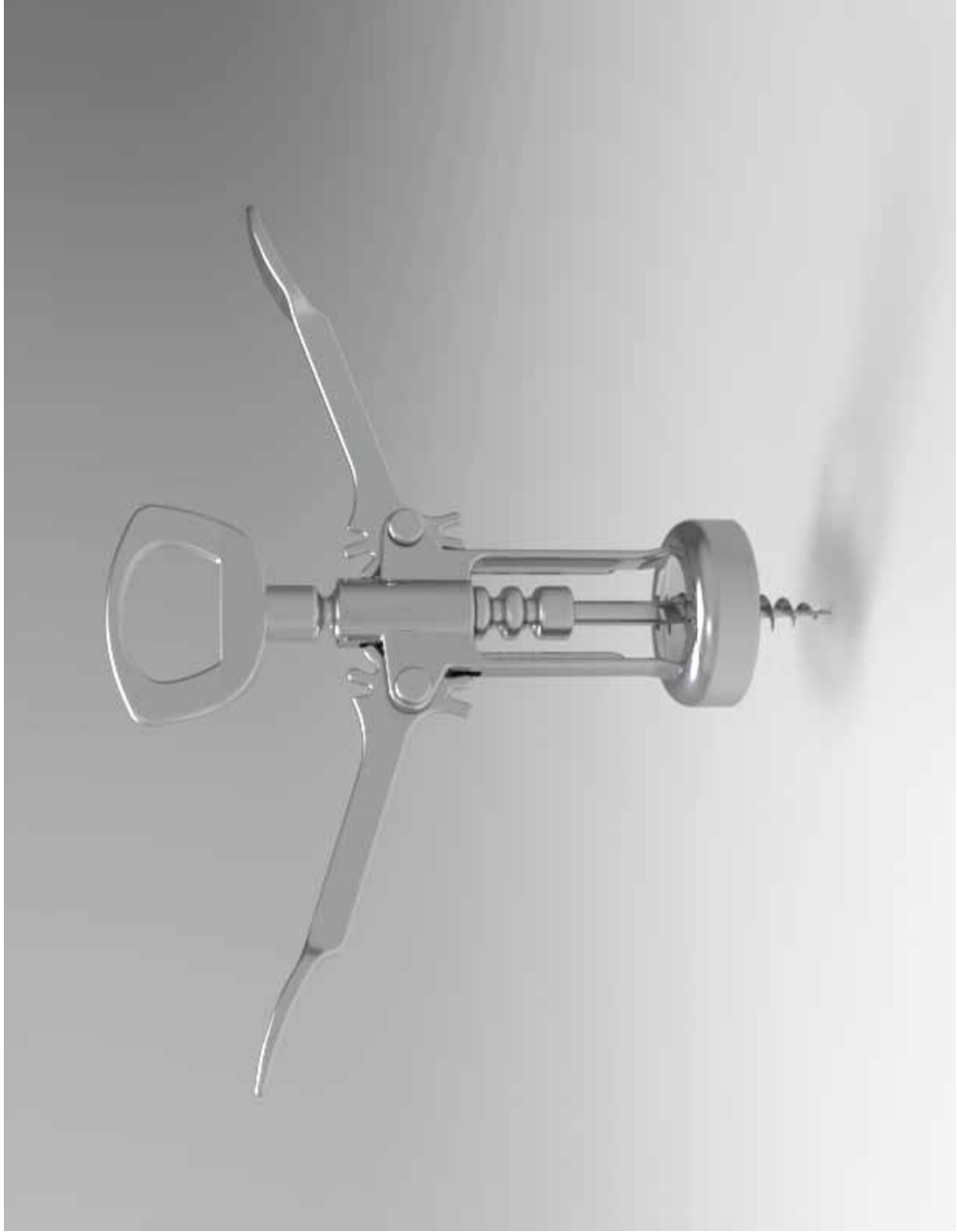
5C COLLET

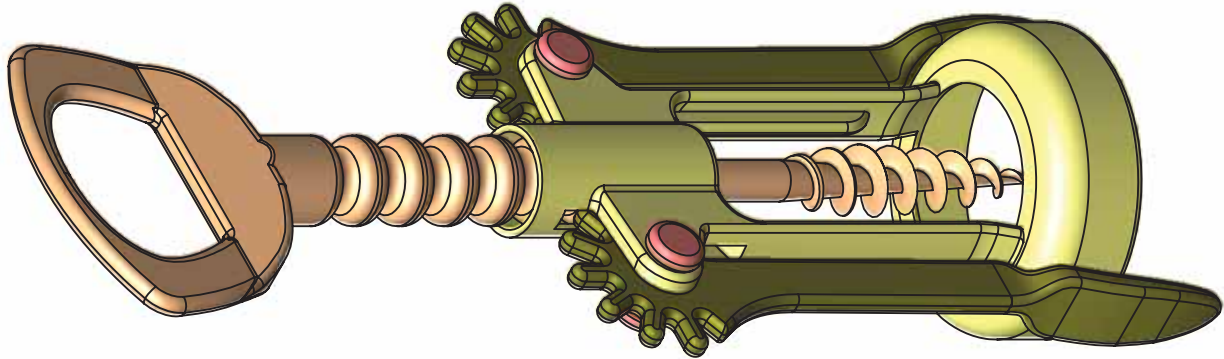


COMBINATION SPANNER

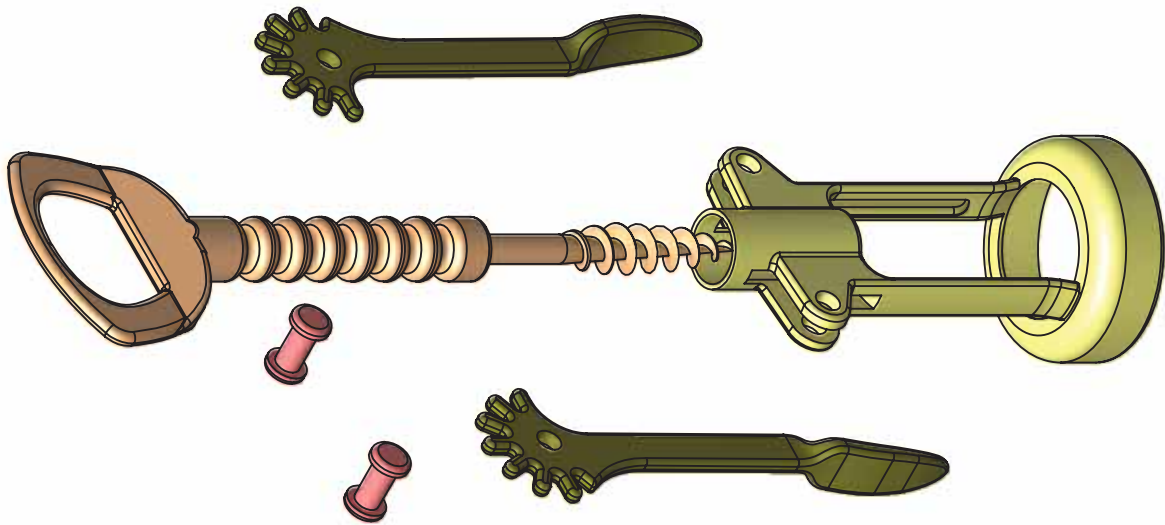


CORK SCREW





ASSEMBLED VIEW



EXPLODED VIEW

DESCRIPTION. Cork Screw Exploded

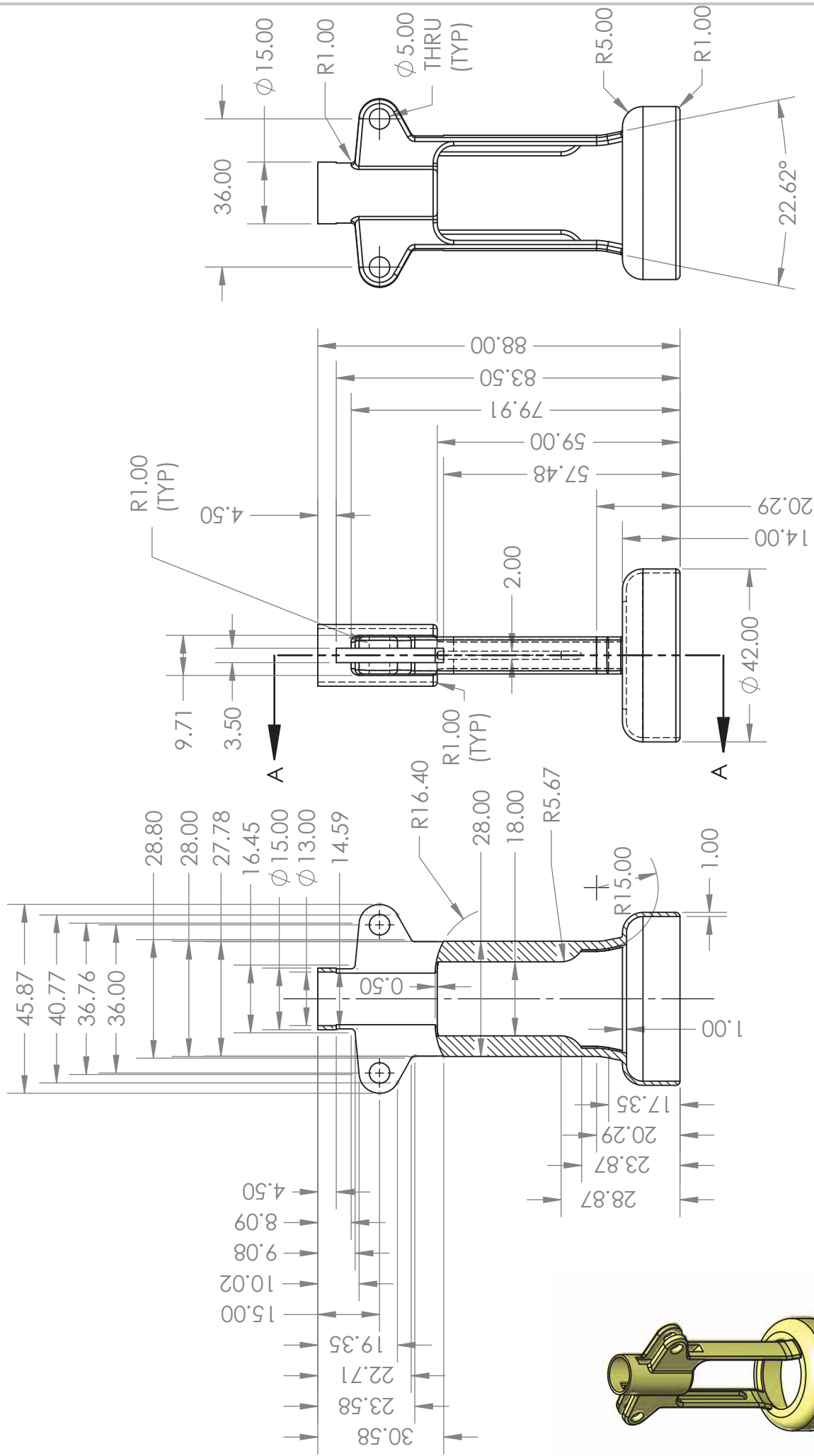
SHEET

1 OF 1

ANGLE OF PROJECTION

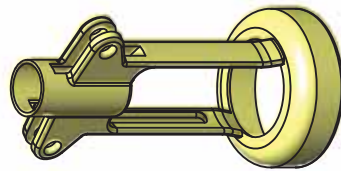


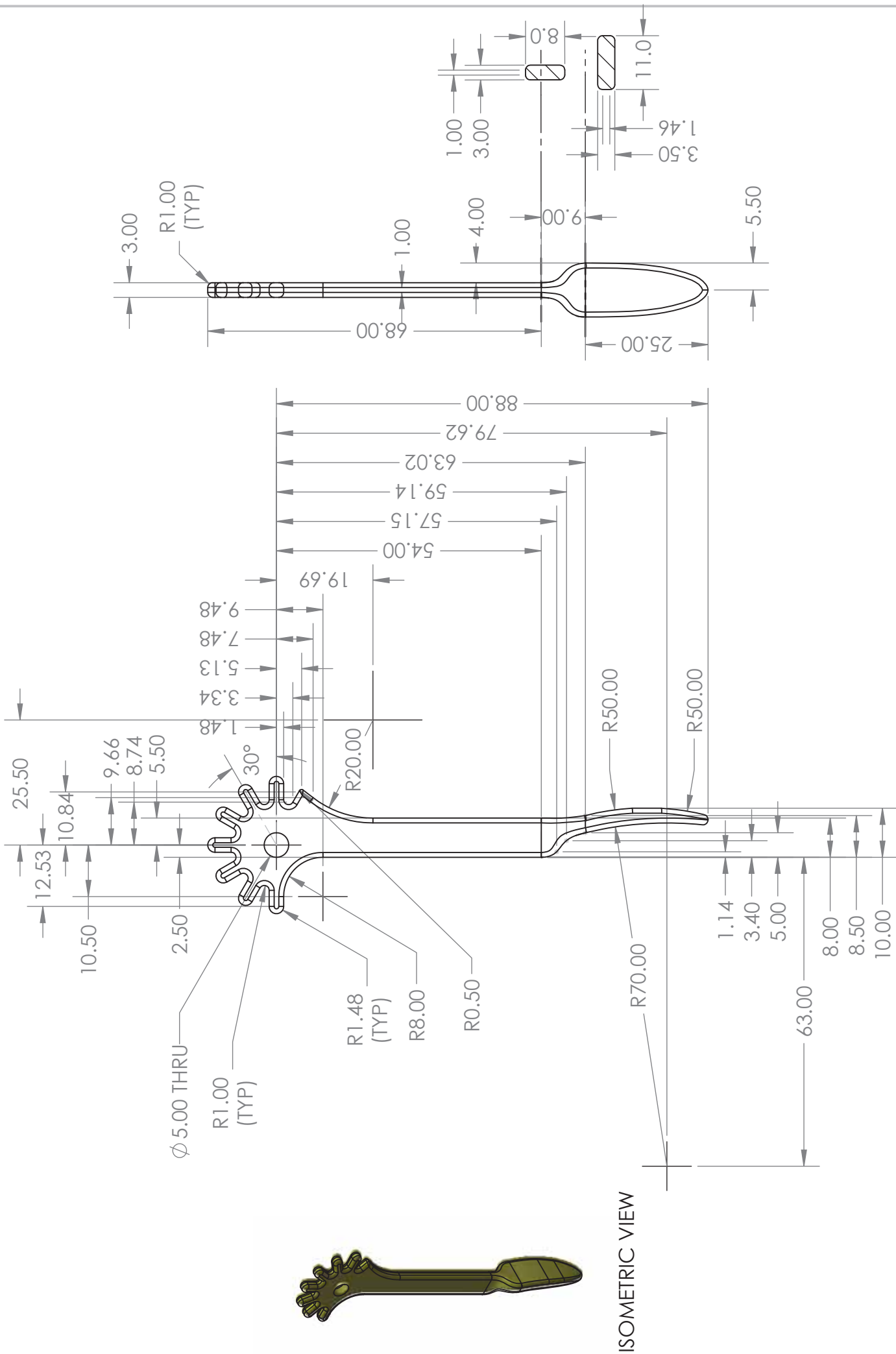
ALL DIMENSIONS ARE IN MM



SECTION A-A
SCALE 1:1.3

ISOMETRIC VIEW





DESCRIPTION.

Leaver

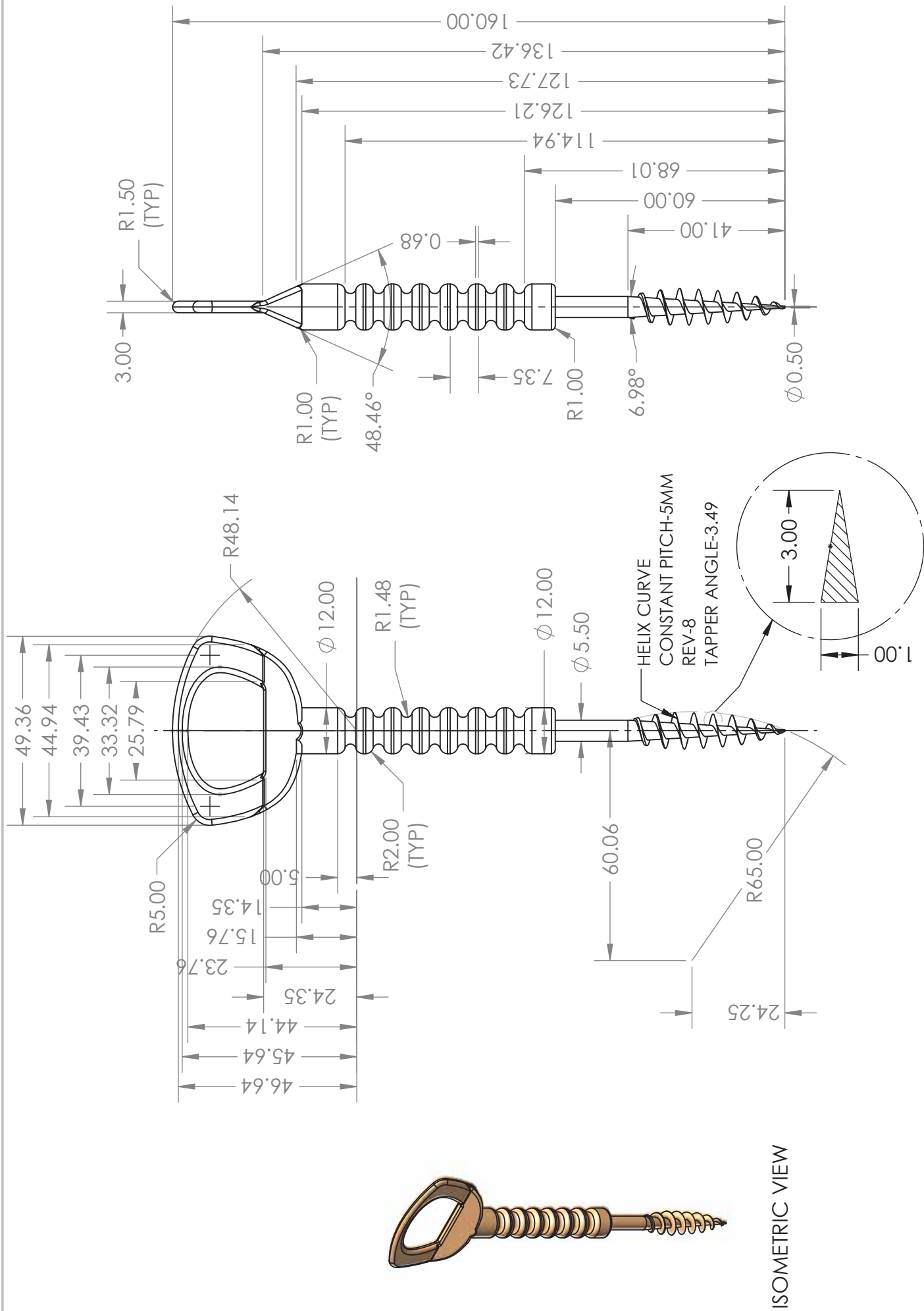
SHEET

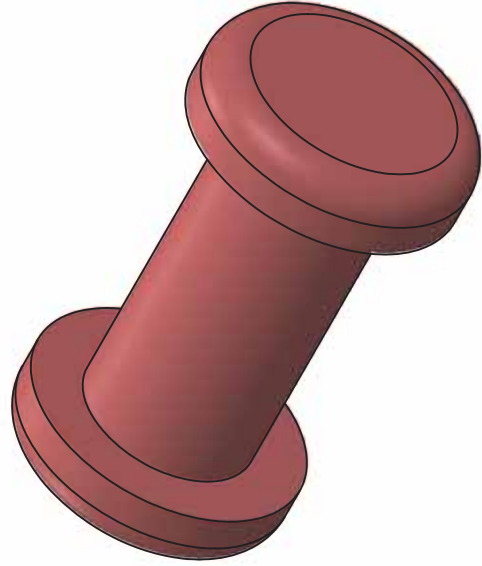
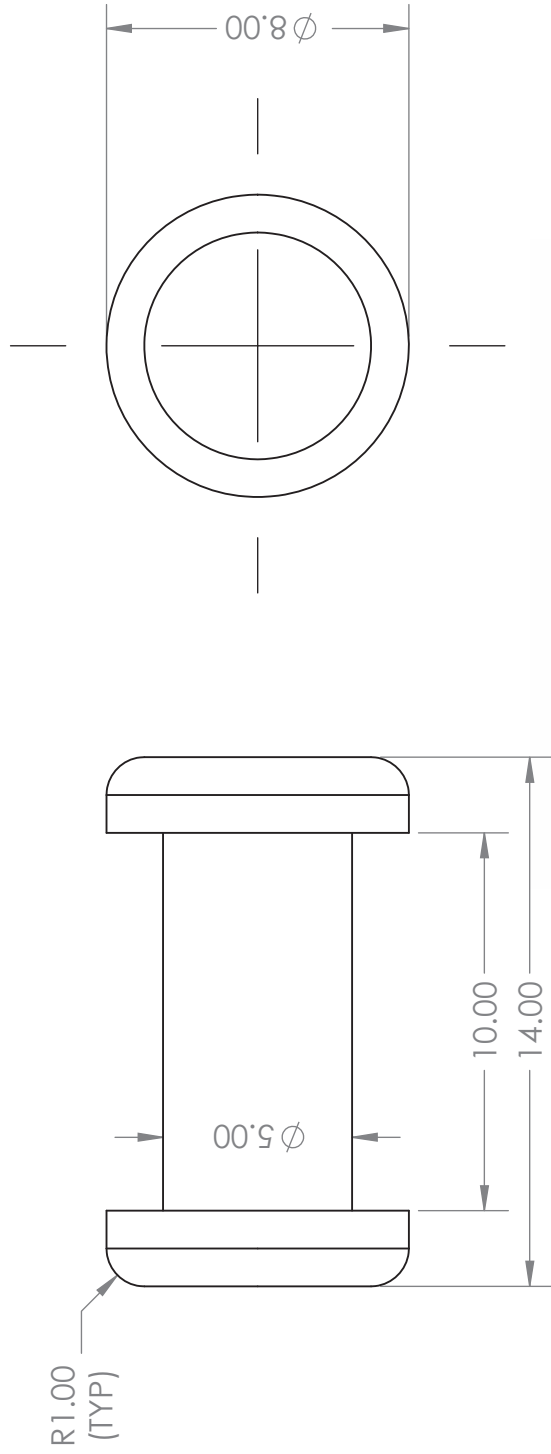
2 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM





DESCRIPTION.

Rivet

SHEET

4 OF 4

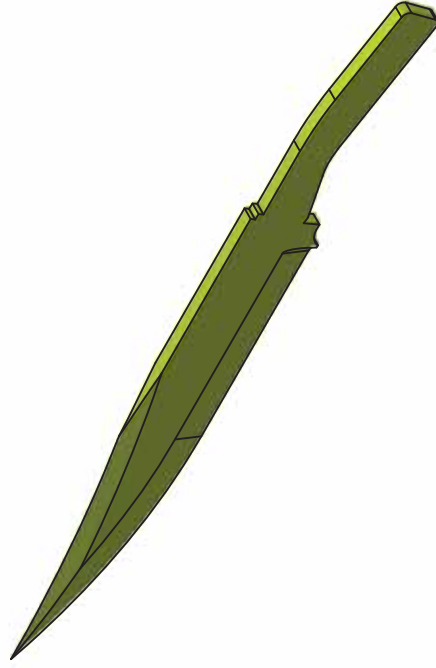
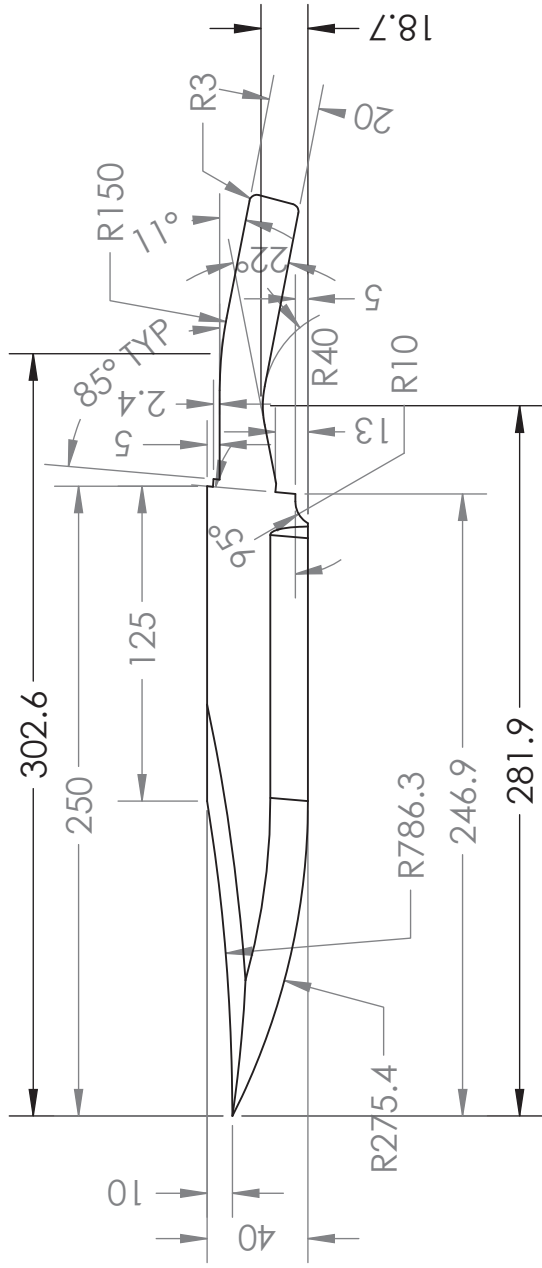
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

DAGGER





DESCRIPTION : KNIFE BLADE

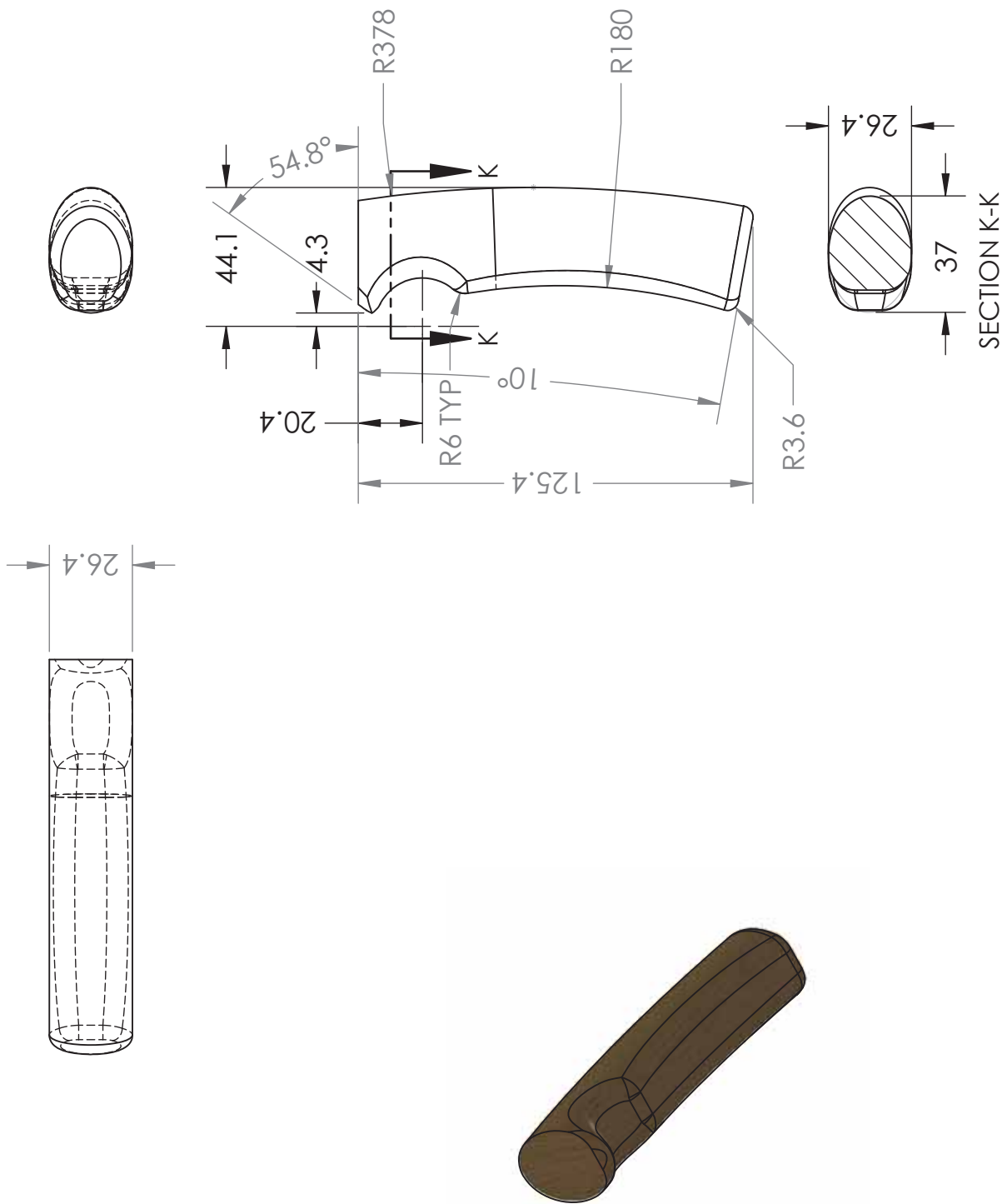
SHEET

1 OF 3

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION : HANDLE

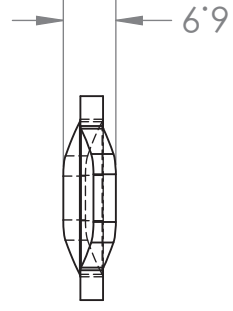
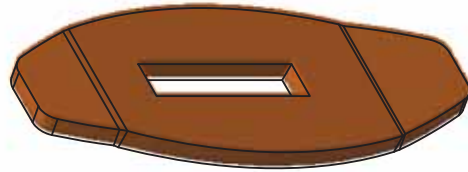
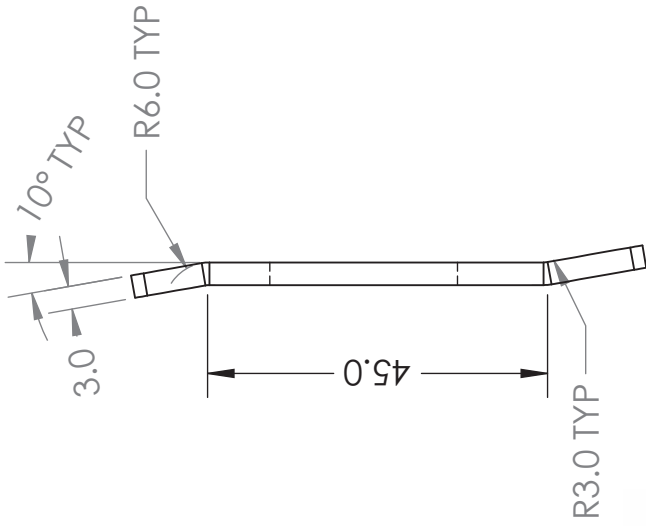
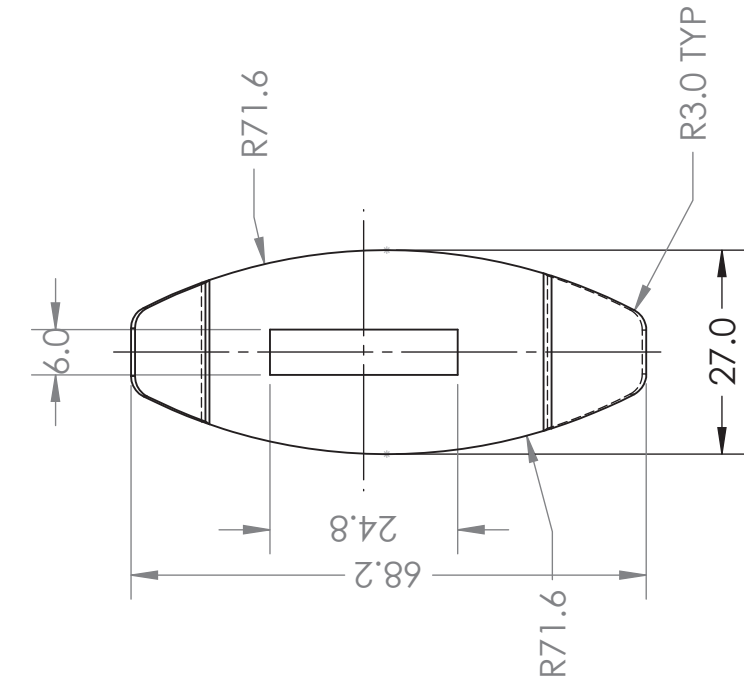
SHEET

3 OF 3

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

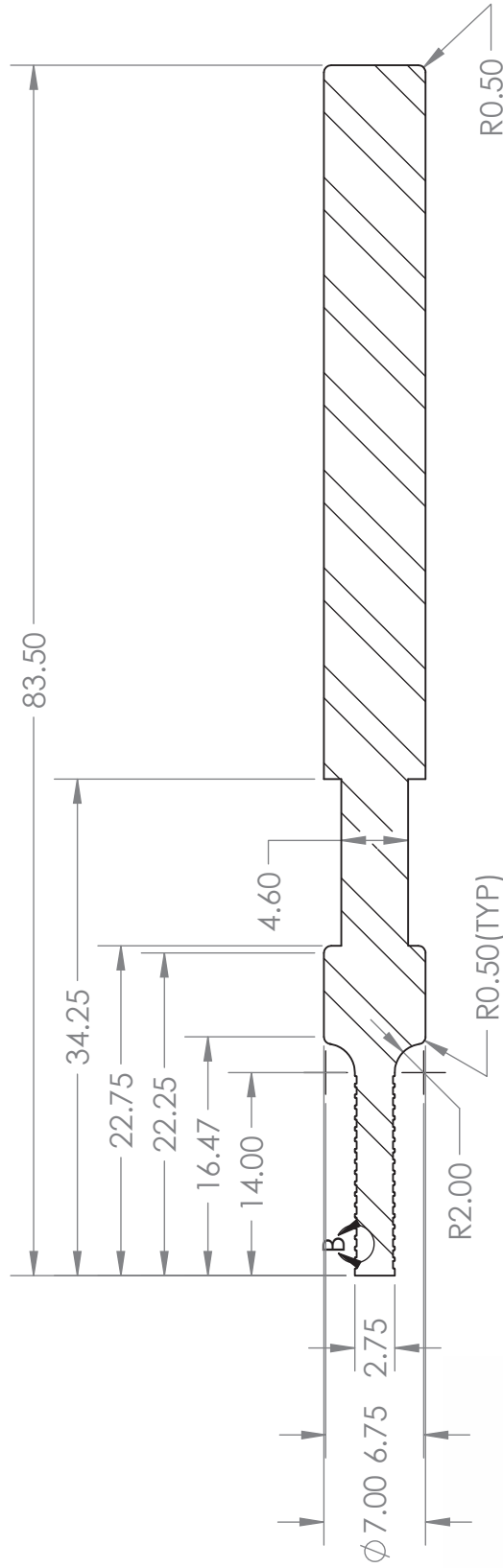
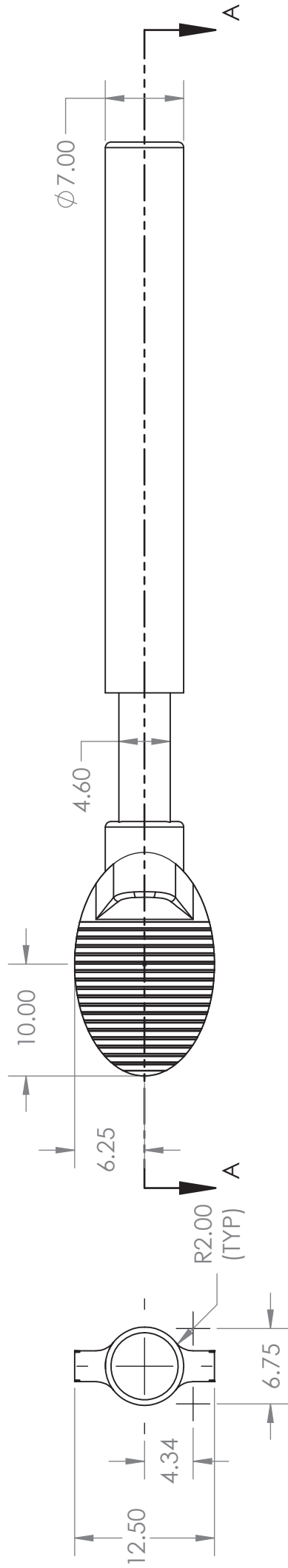
2 OF 3

SHEET

DESCRIPTION : KNIFE GUARD

DRILL CHUCK KEY

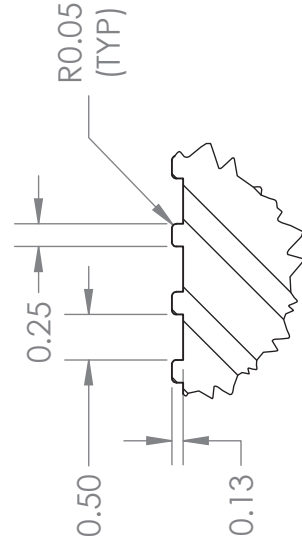




SECTION A-A

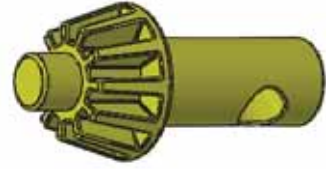
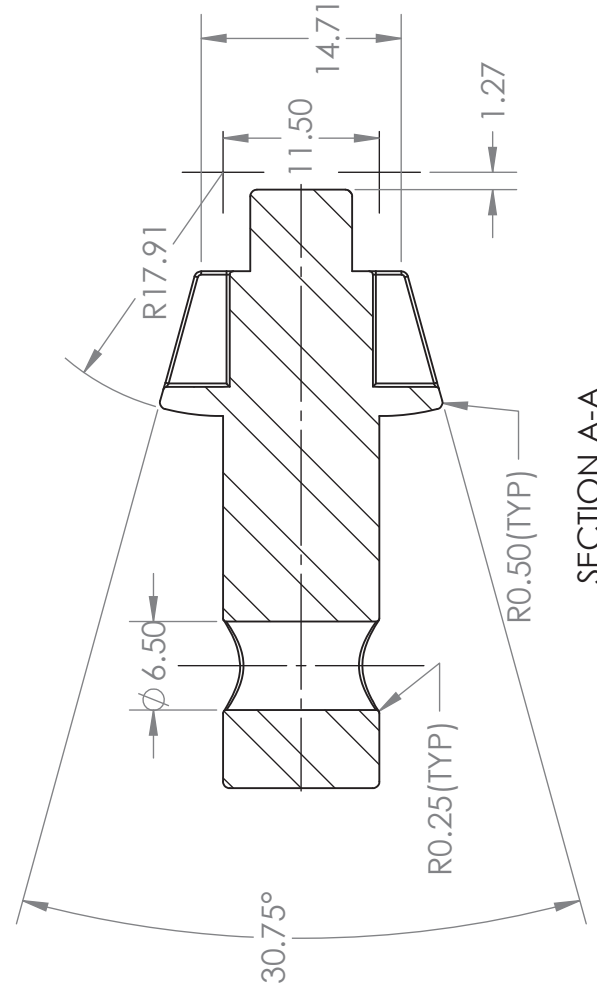
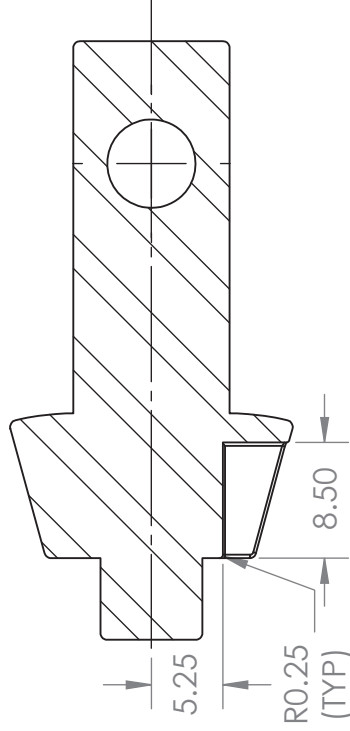
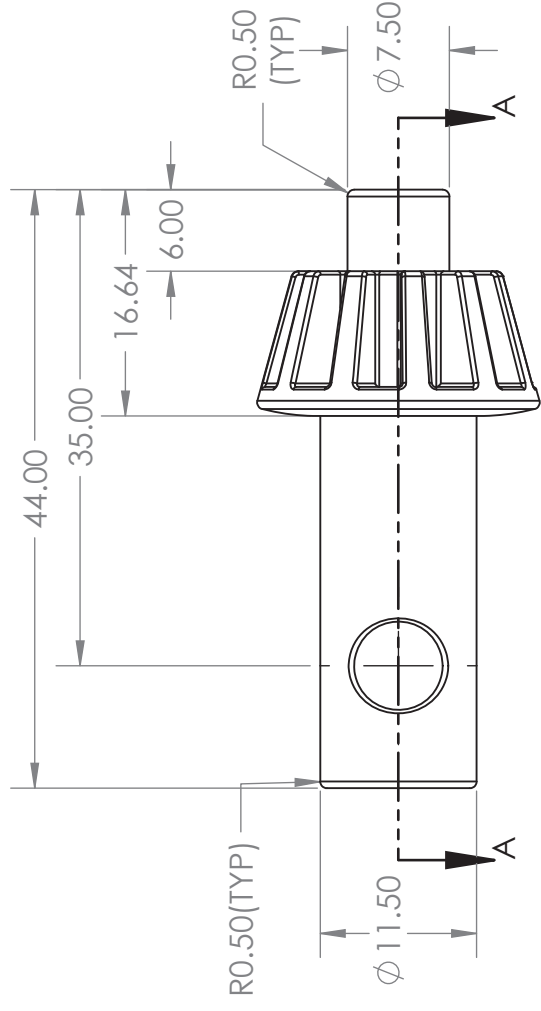
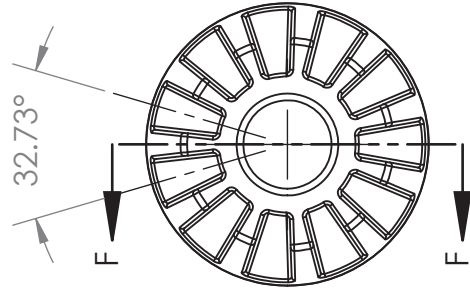


ISOMETRIC VIEW



DETAIL B

DESCRIPTION.	Handle	SHEET 1 OF 2	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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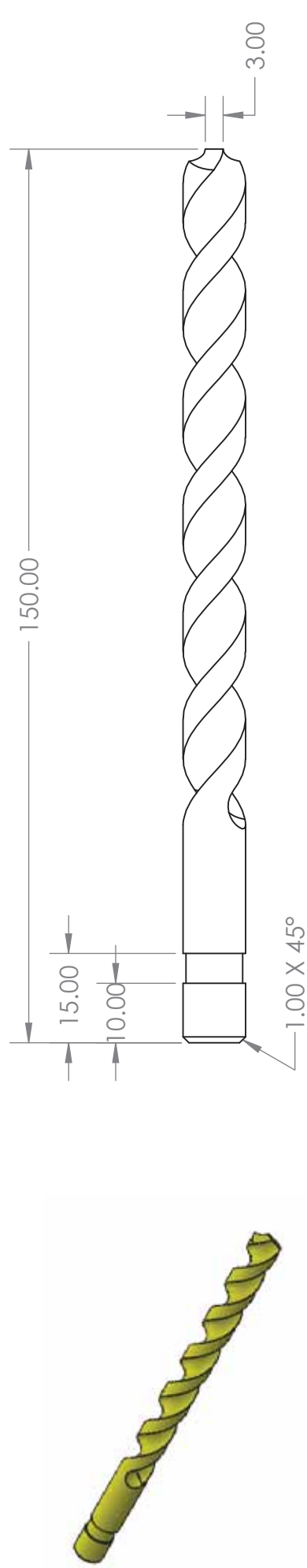
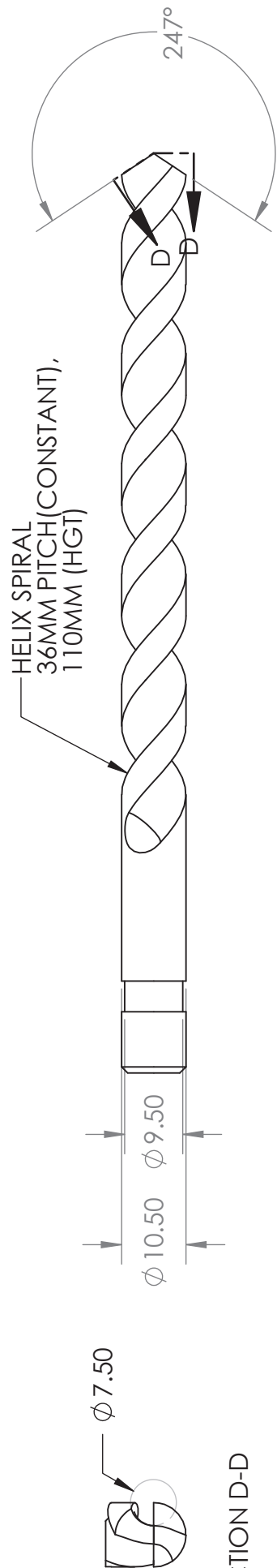


ISOMETRIC VIEW

DESCRIPTION.	Pilot	SHEET 1 OF 2	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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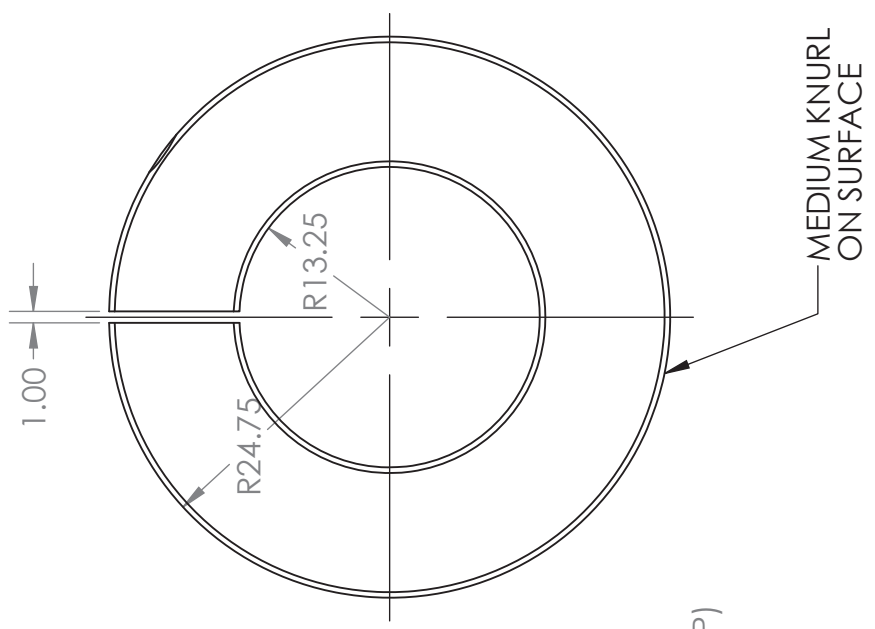
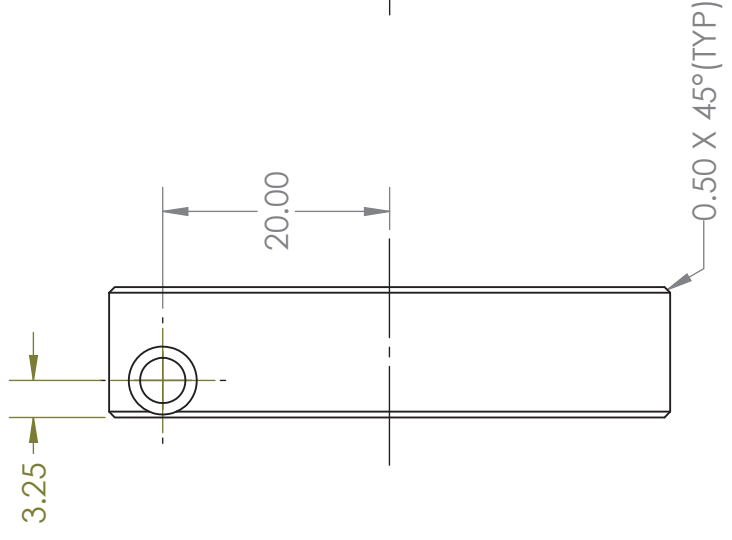
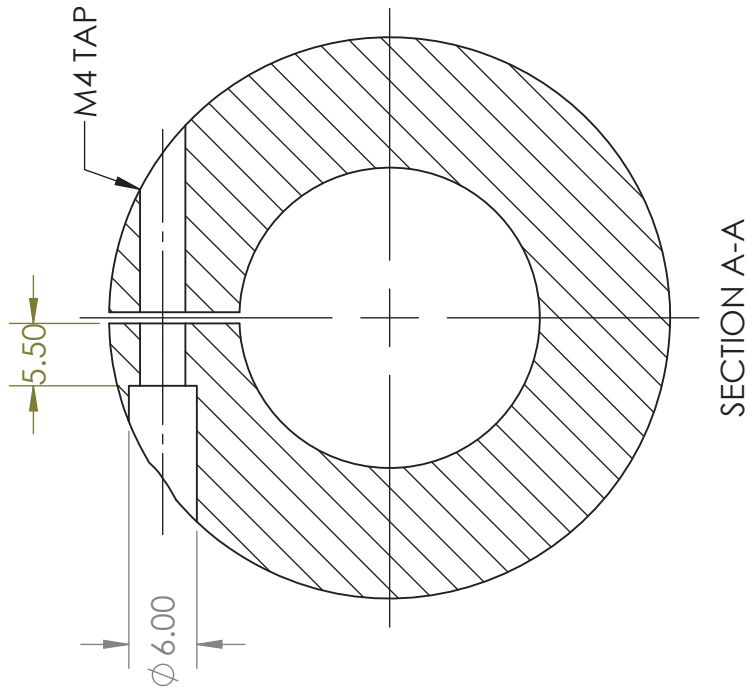
DRILL CHUCK





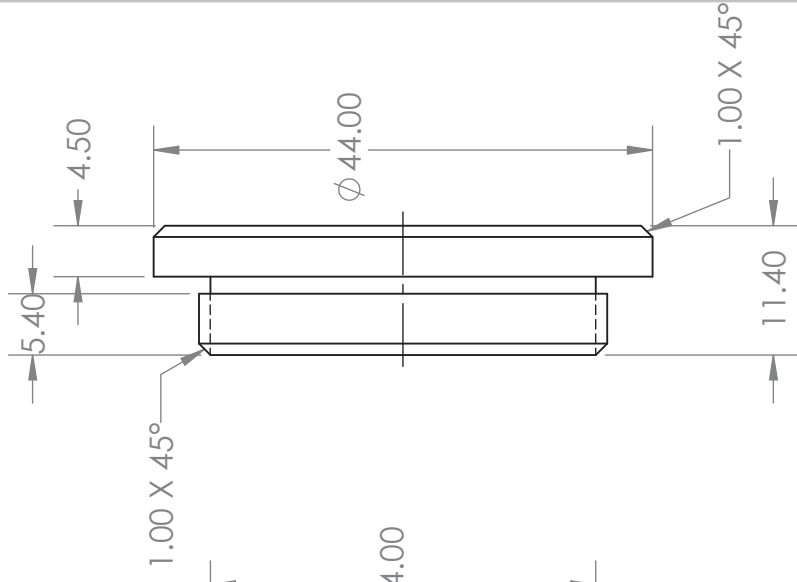
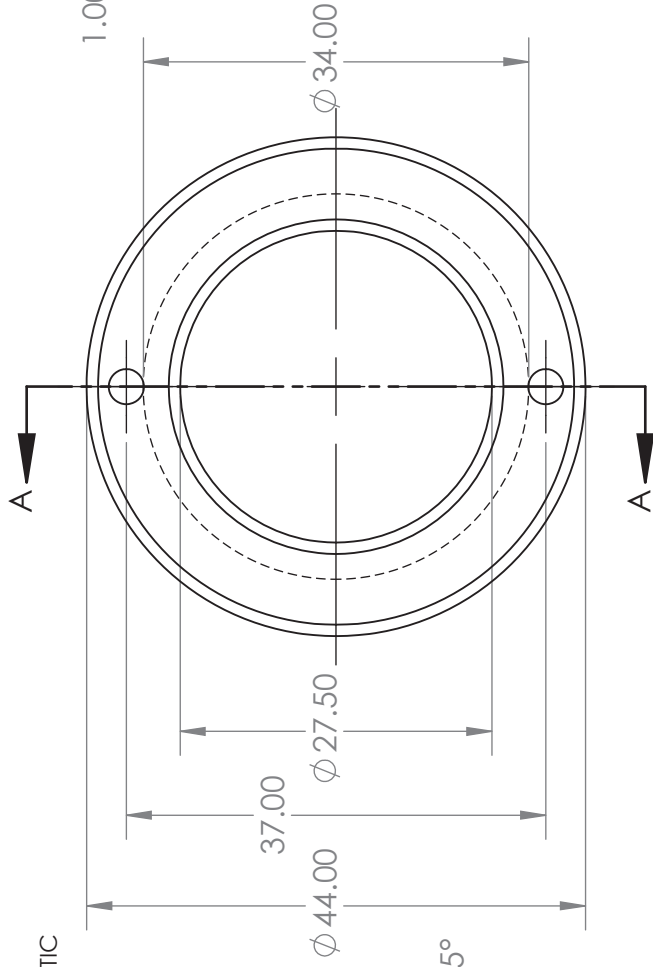
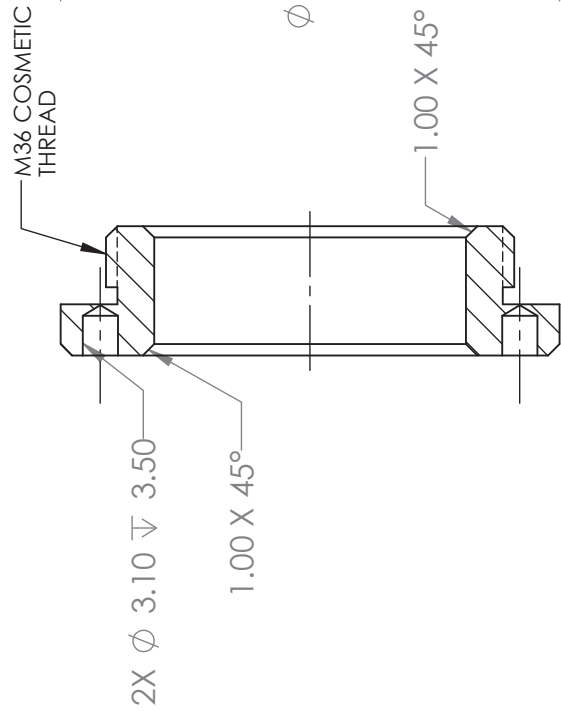
ISOMETRIC VIEW

DESCRIPTION.	Drill	SHEET 1 OF 9	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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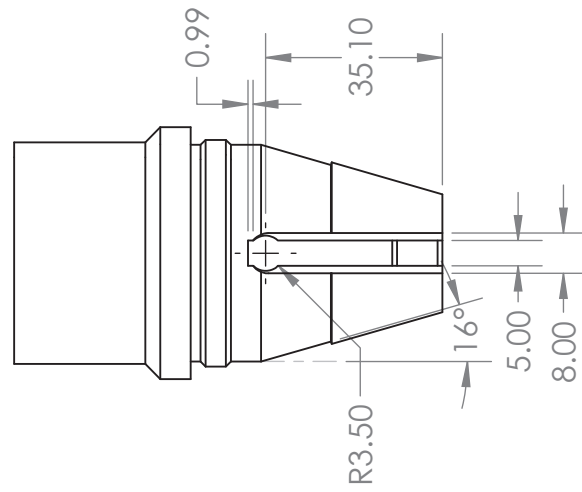
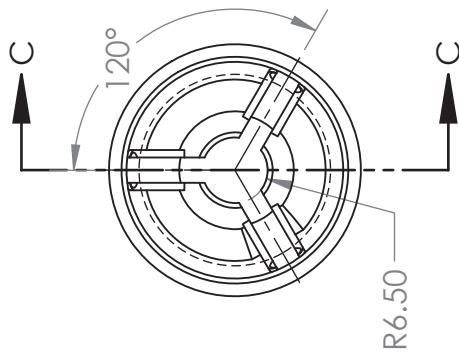
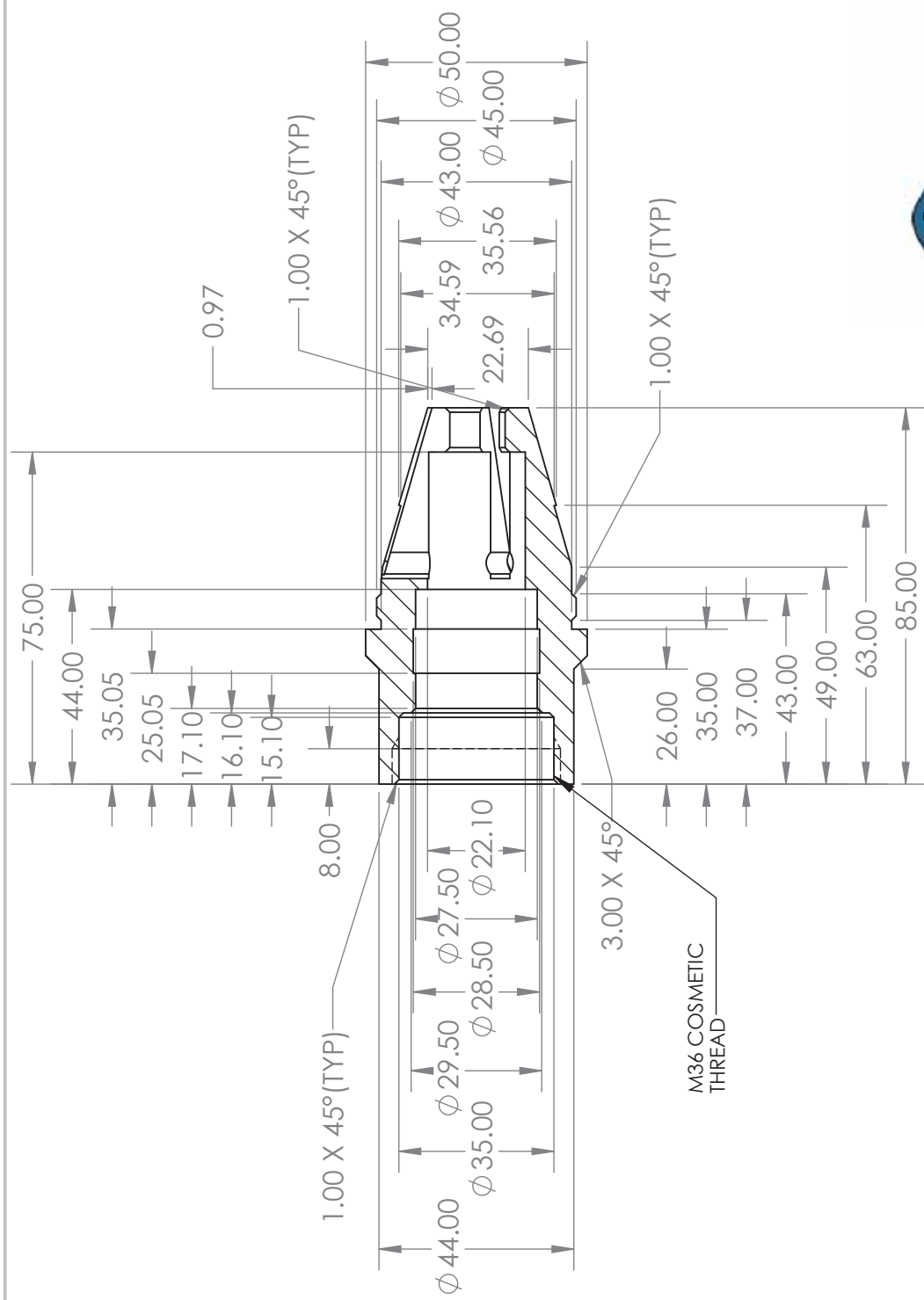


ISOMETRIC VIEW

DESCRIPTION.	Clamp Ring	SHEET	3 OF 9	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Moving Body

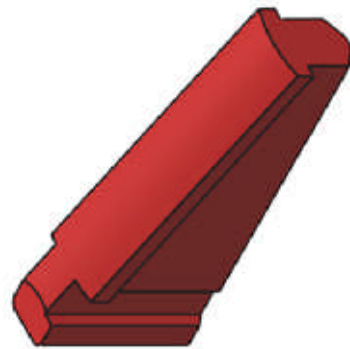
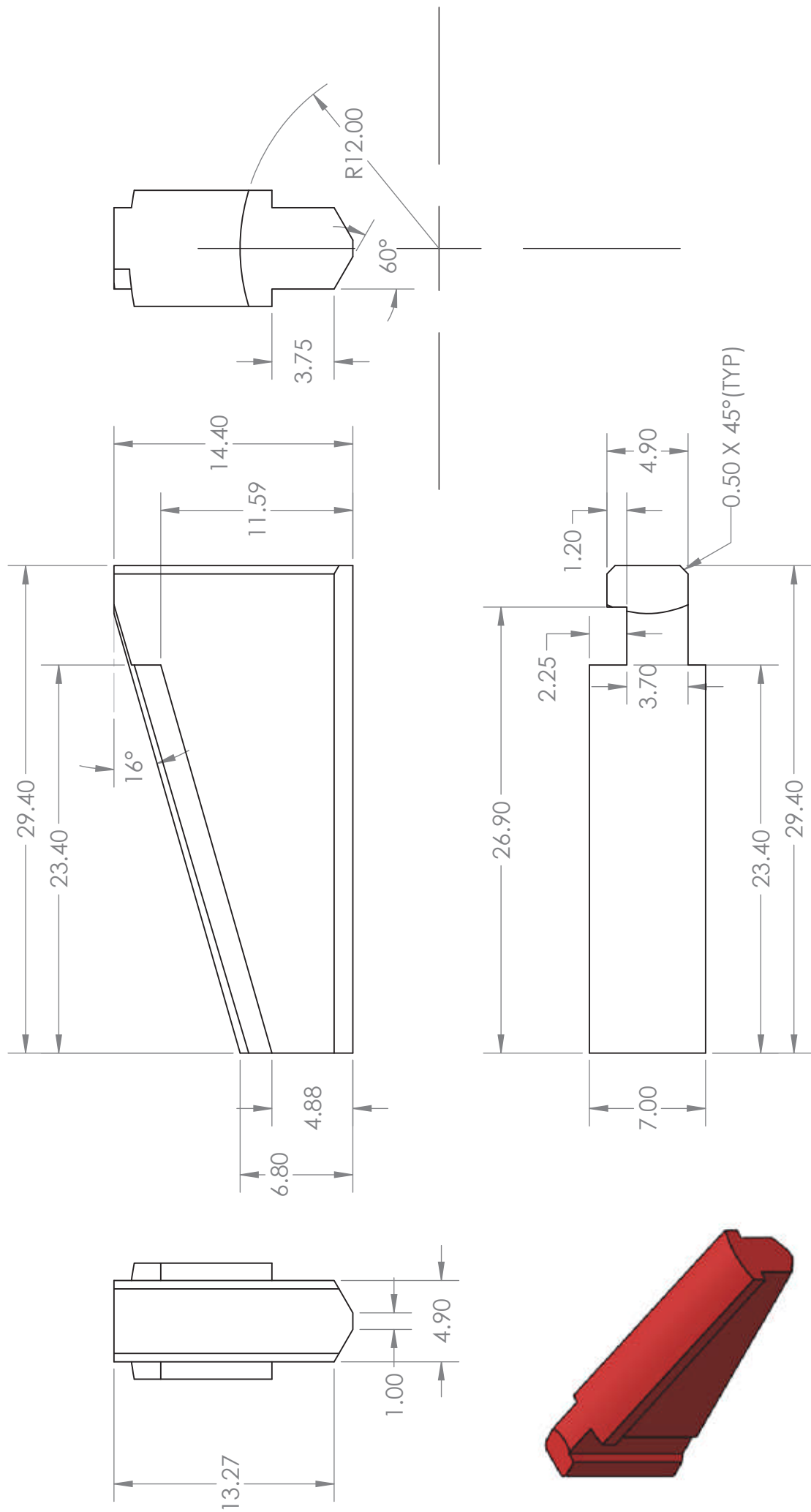
SHEET

5 OF 9

ANGLE OF PROJECTION

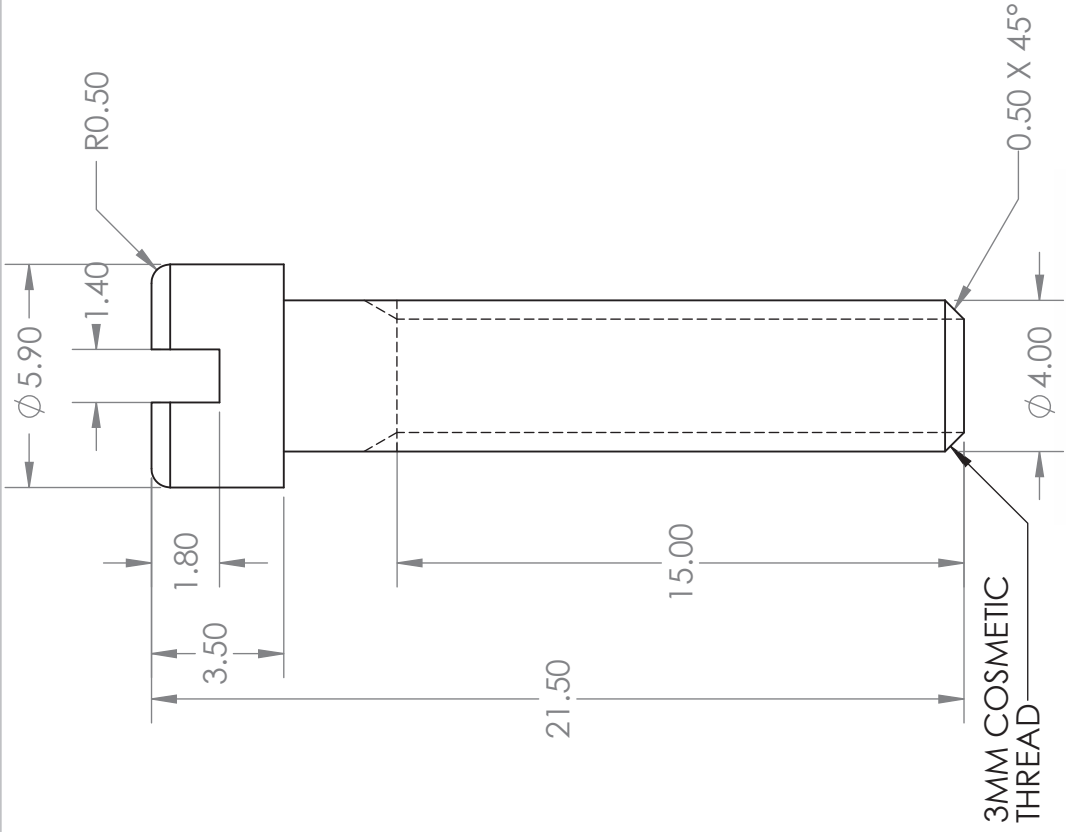


ALL DIMENSIONS ARE IN MM

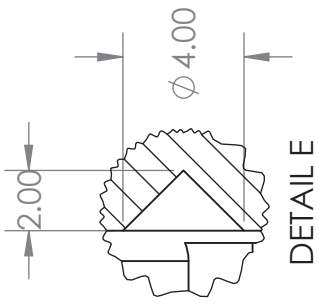
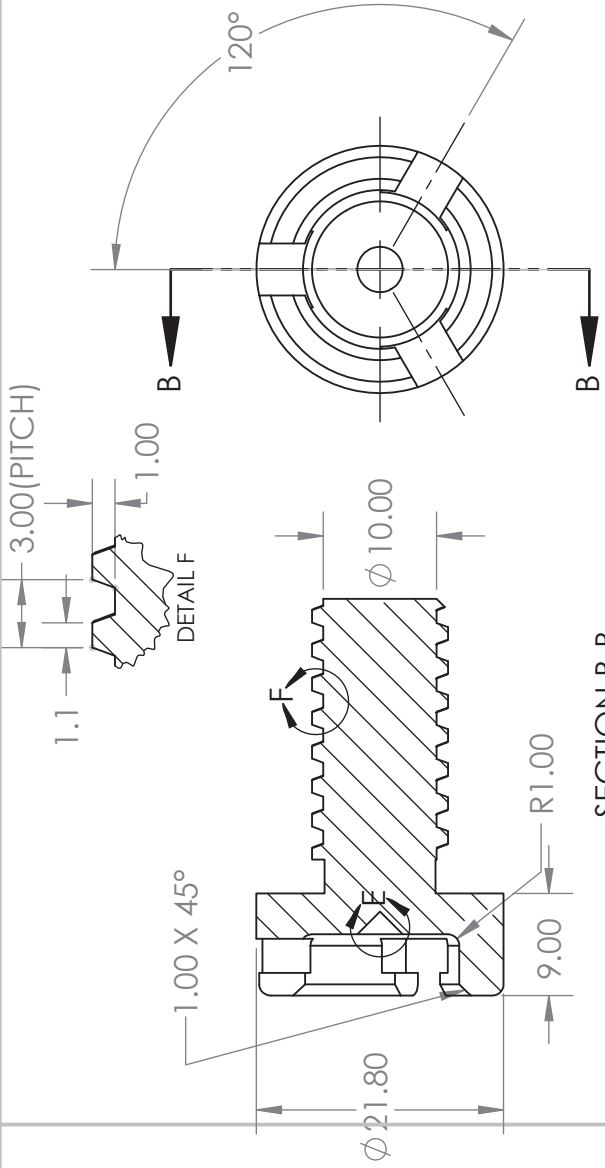


ISOMETRIC VIEW

DESCRIPTION.	Jaw	SHEET 8 OF 9	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Ring Screw & Screw

SHEET 9 OF 9

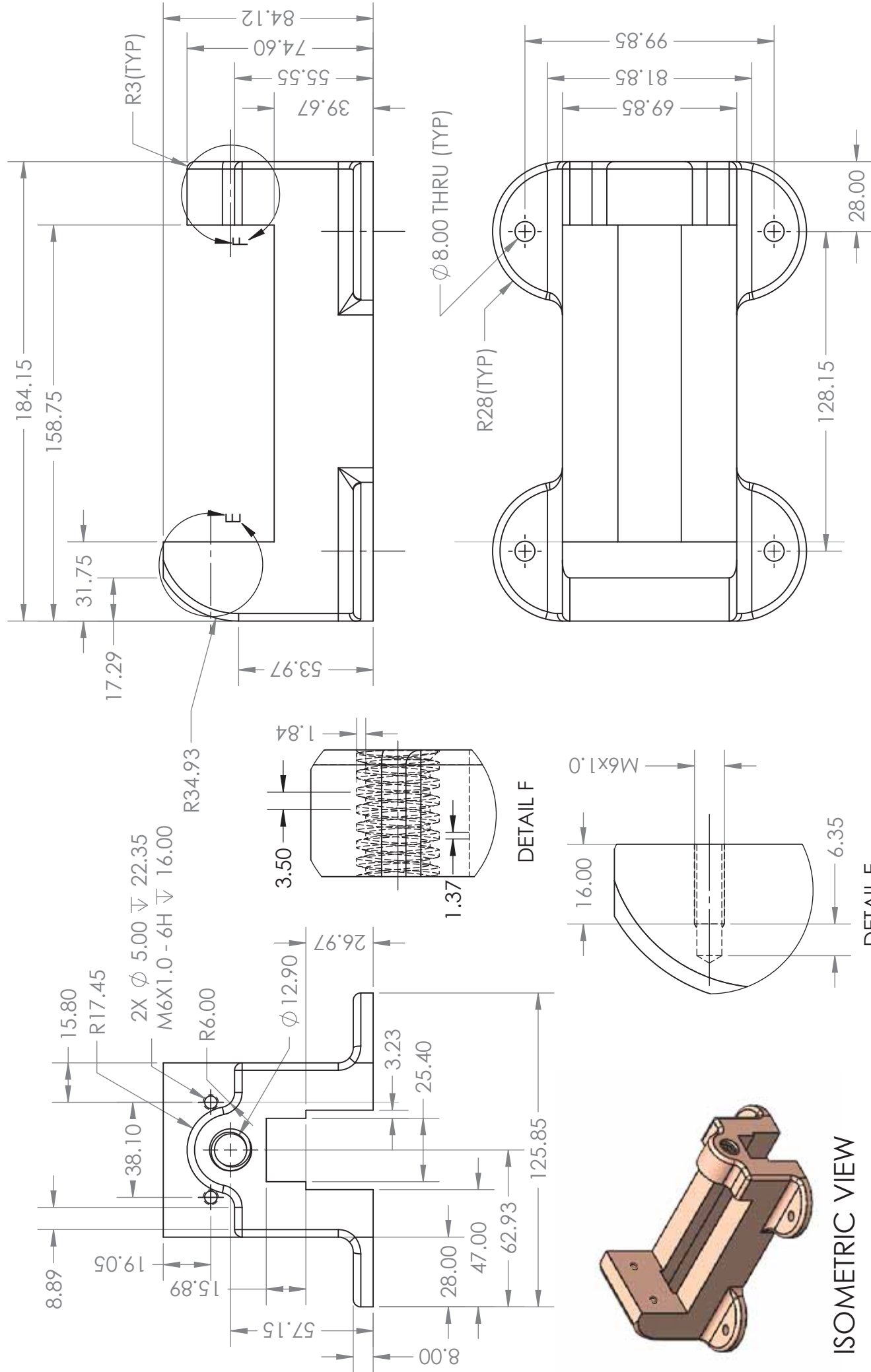
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

DRILLING VICE





ISOMETRIC VIEW

DESCRIPTION.

Vice Base

SHEET

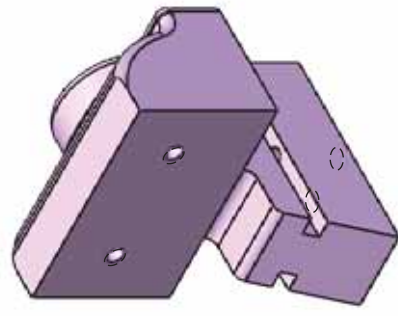
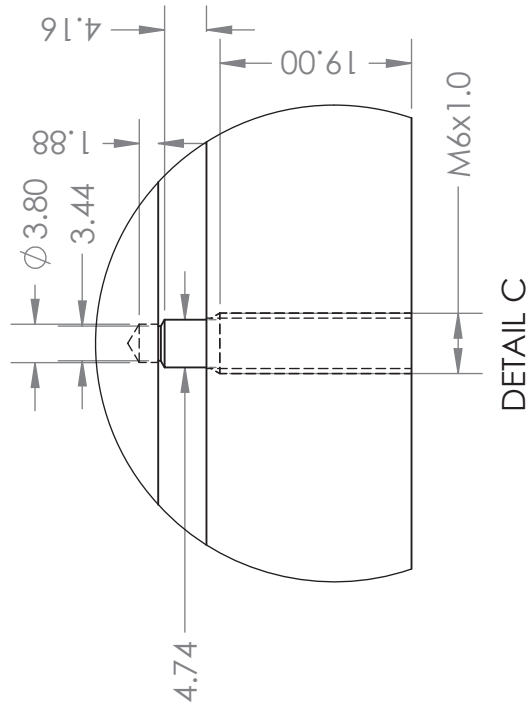
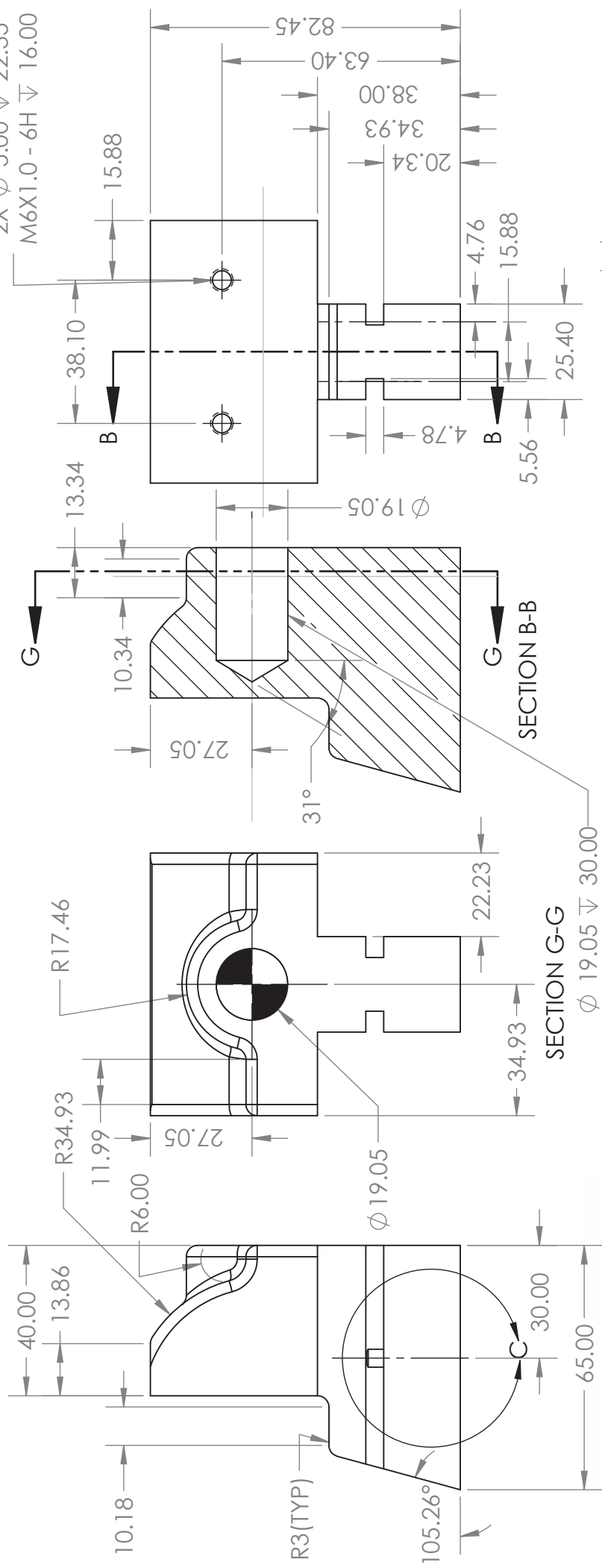
1 OF 6

ANGLE OF PROJECTION



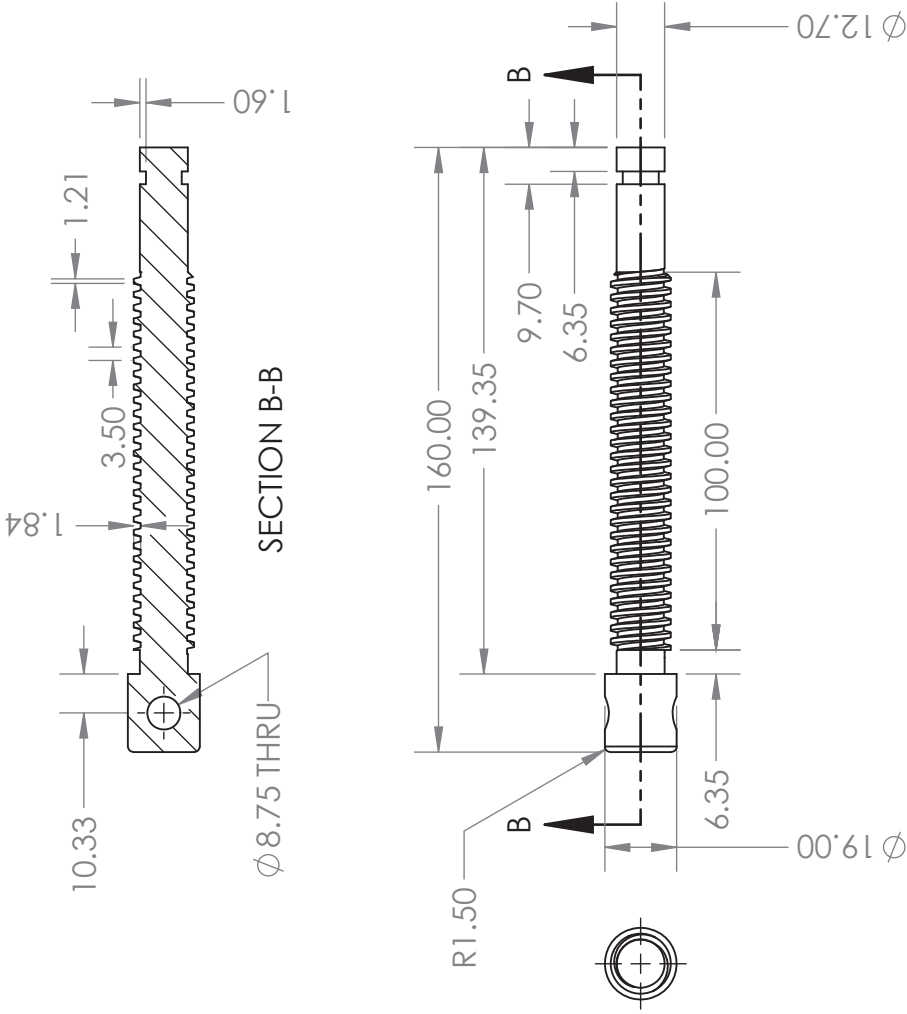
ALL DIMENSIONS ARE IN MM

2X ϕ 5.00 ∇ 22.35
M6X1.0 - 6H ∇ 16.00

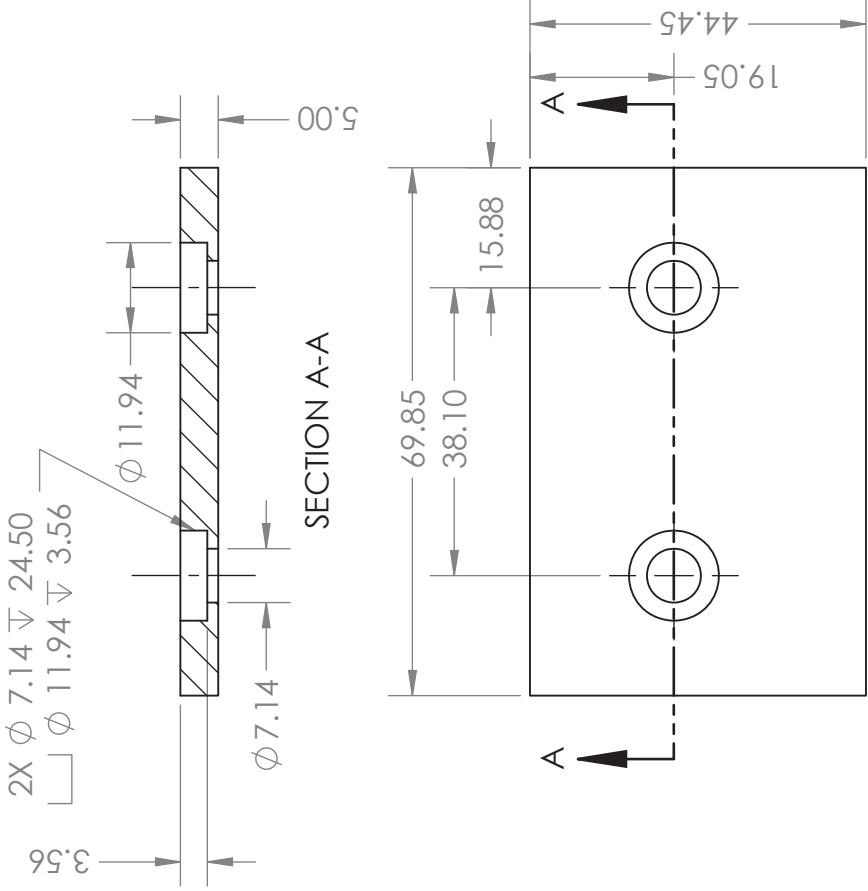


ISOMETRIC VIEW

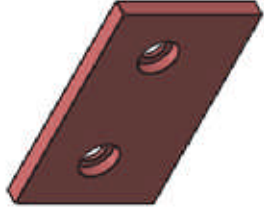
DESCRIPTION.	Movable Jaw	SHEET	2 OF 6	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW



DESCRIPTION. Spindle & Jaw Plate

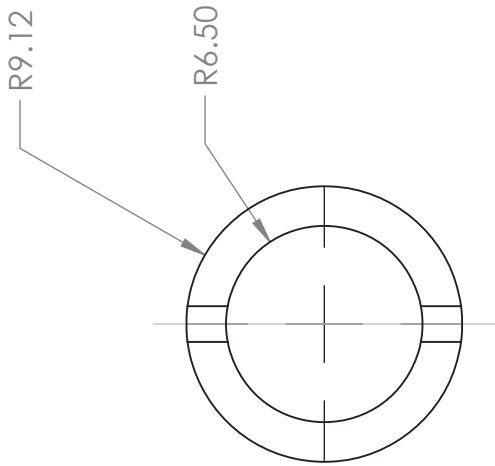
SHEET

3 OF 6

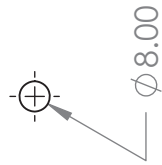
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Bush & Handle

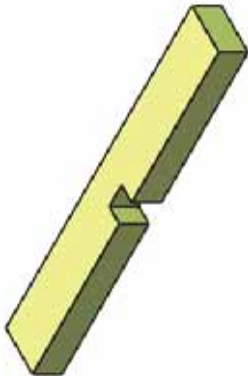
SHEET

4 OF 6

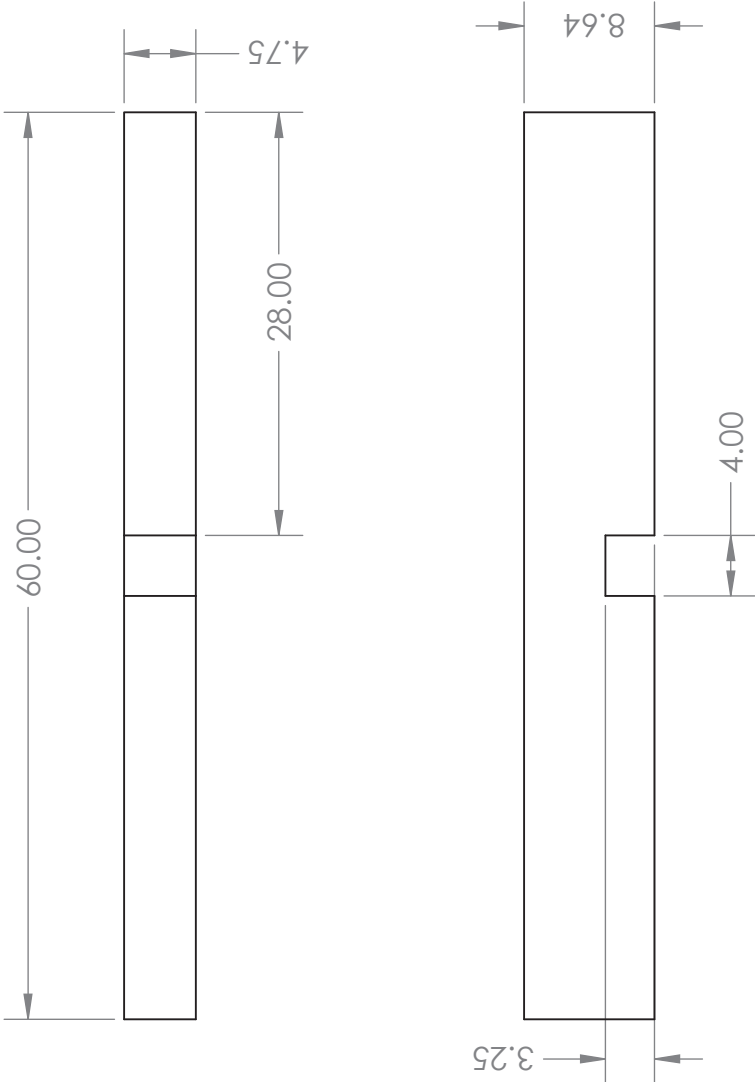
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



DESCRIPTION.

Lock Plate

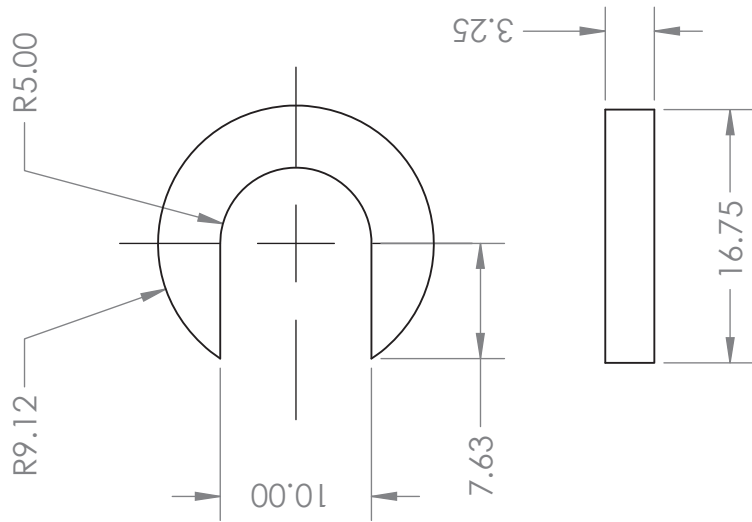
SHEET

6 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION. Lock Washer & End Cap

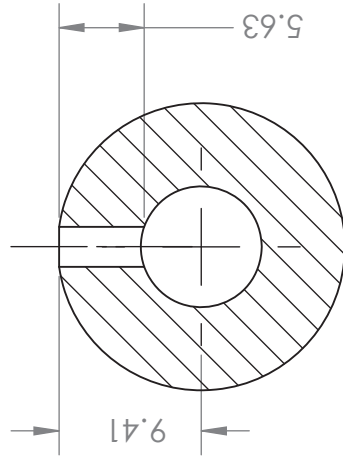
SHEET

5 OF 6

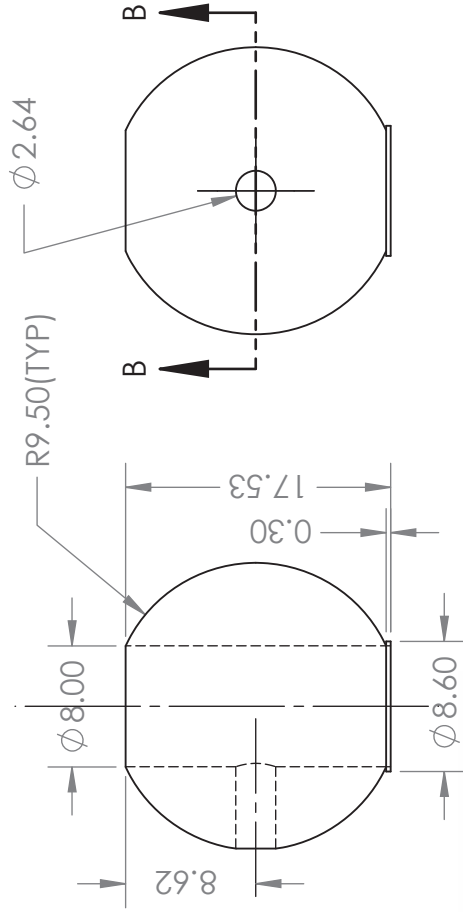
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



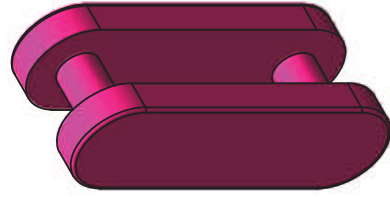
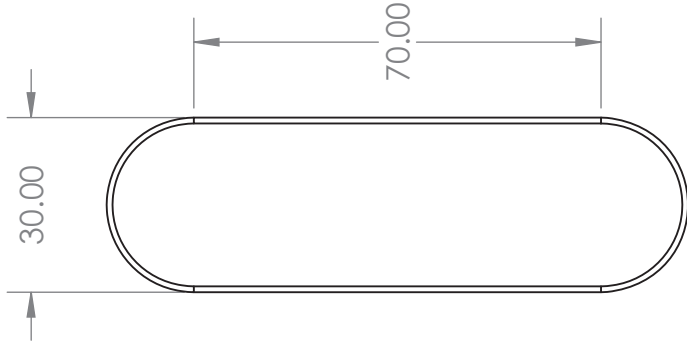
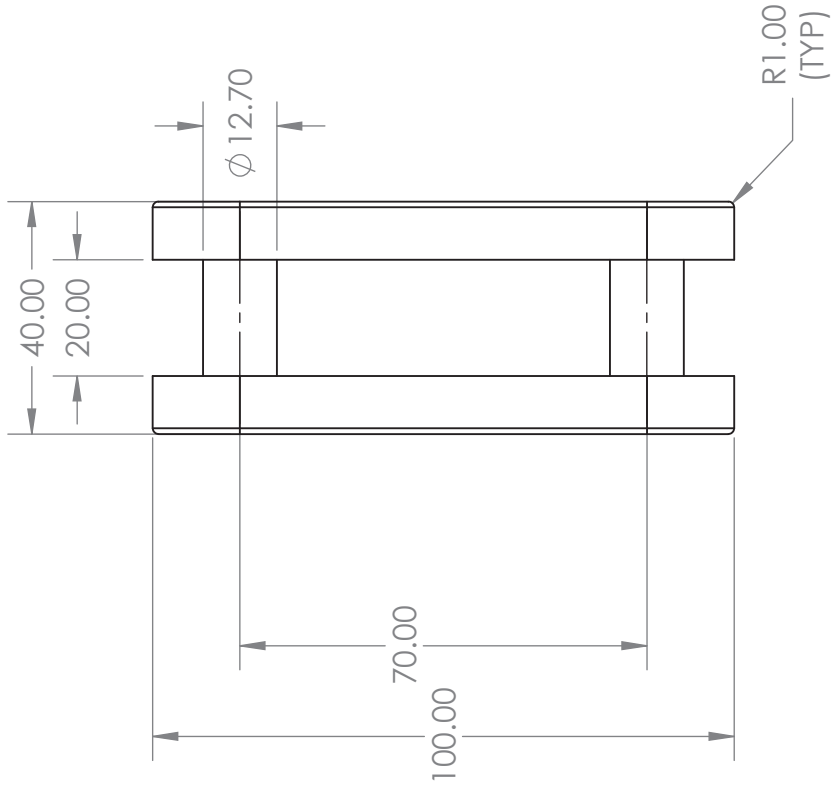
SECTION B-B



ISOMETRIC VIEW

DRUM LIFTER





ISOMETRIC VIEW

DESCRIPTION.

Winch Coupling

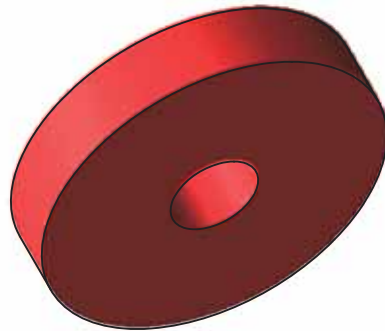
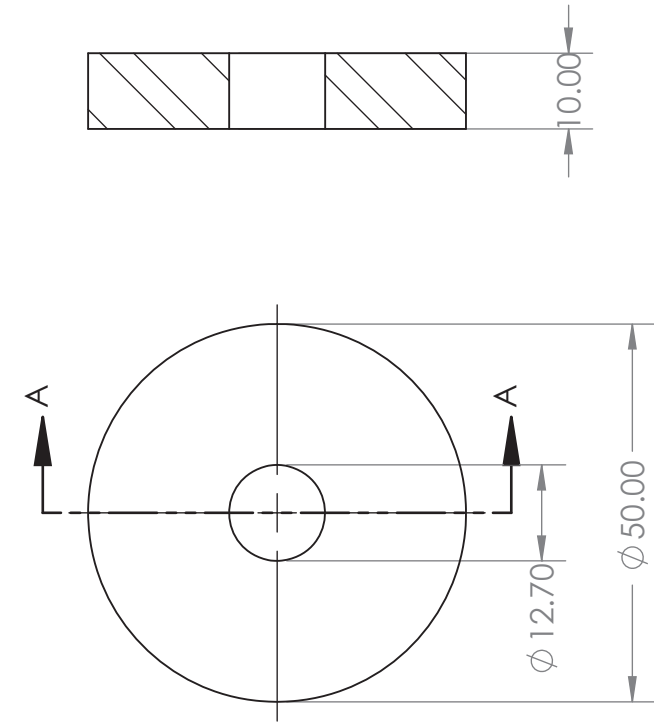
SHEET

1 OF 12

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Upper Ring

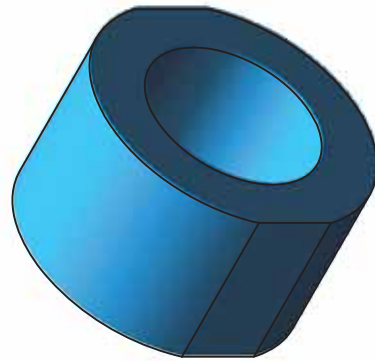
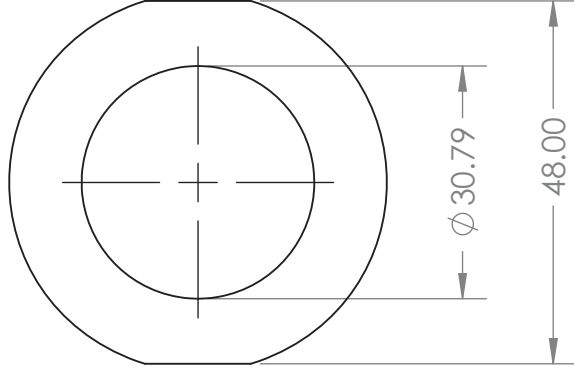
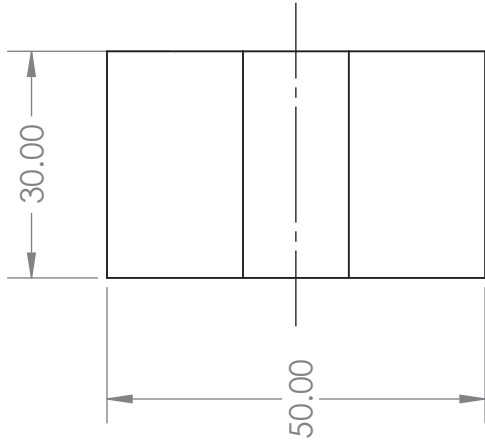
SHEET

2 OF 12

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

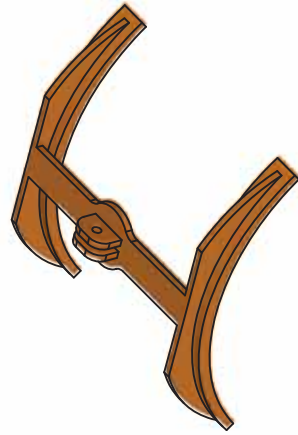
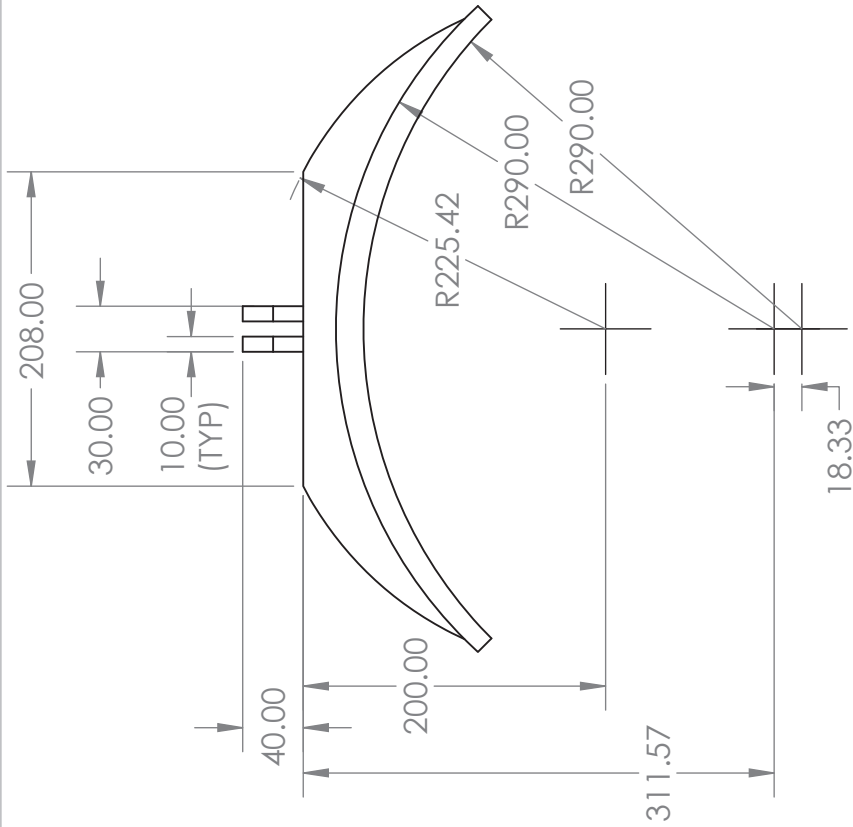
Bush

SHEET 3 OF 12

ANGLE OF PROJECTION

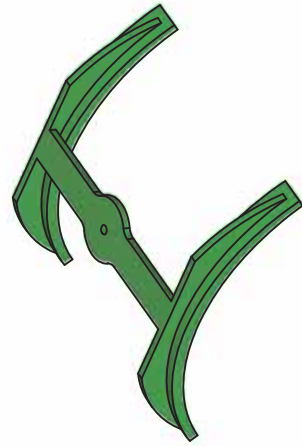
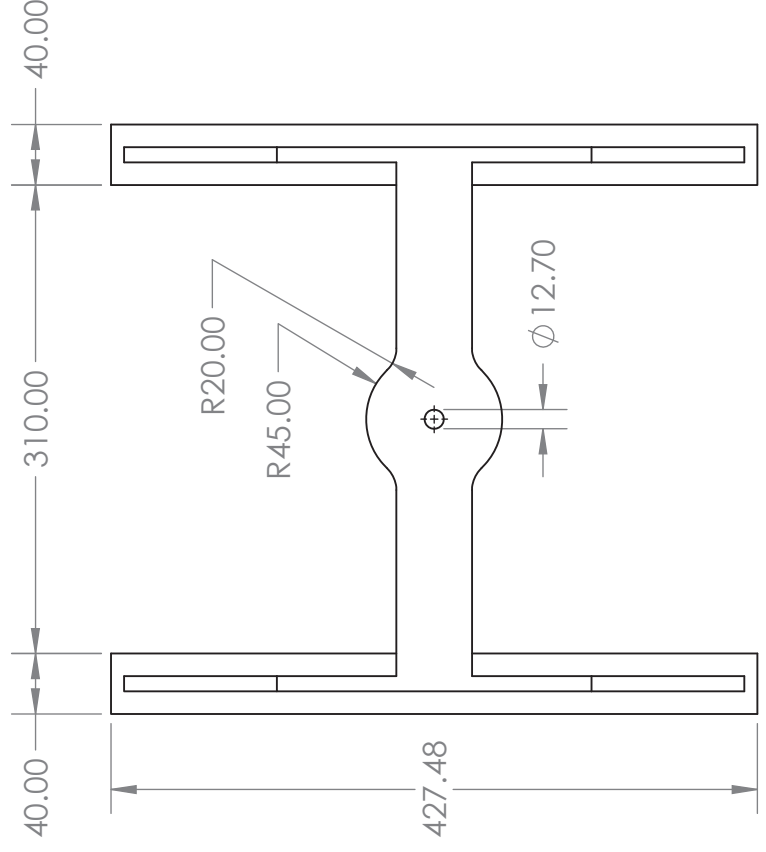
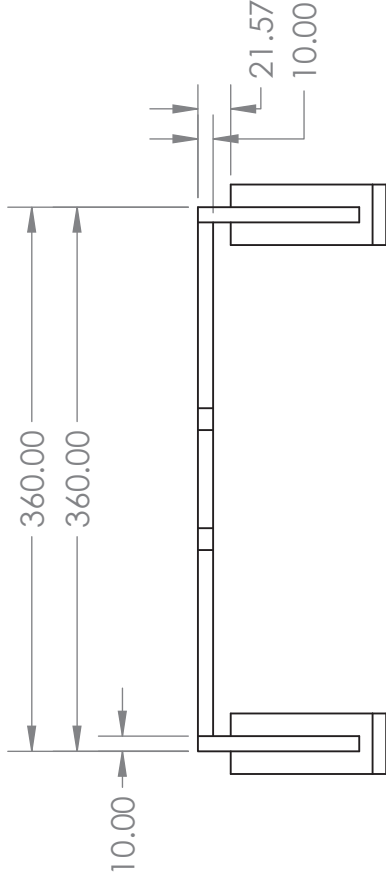
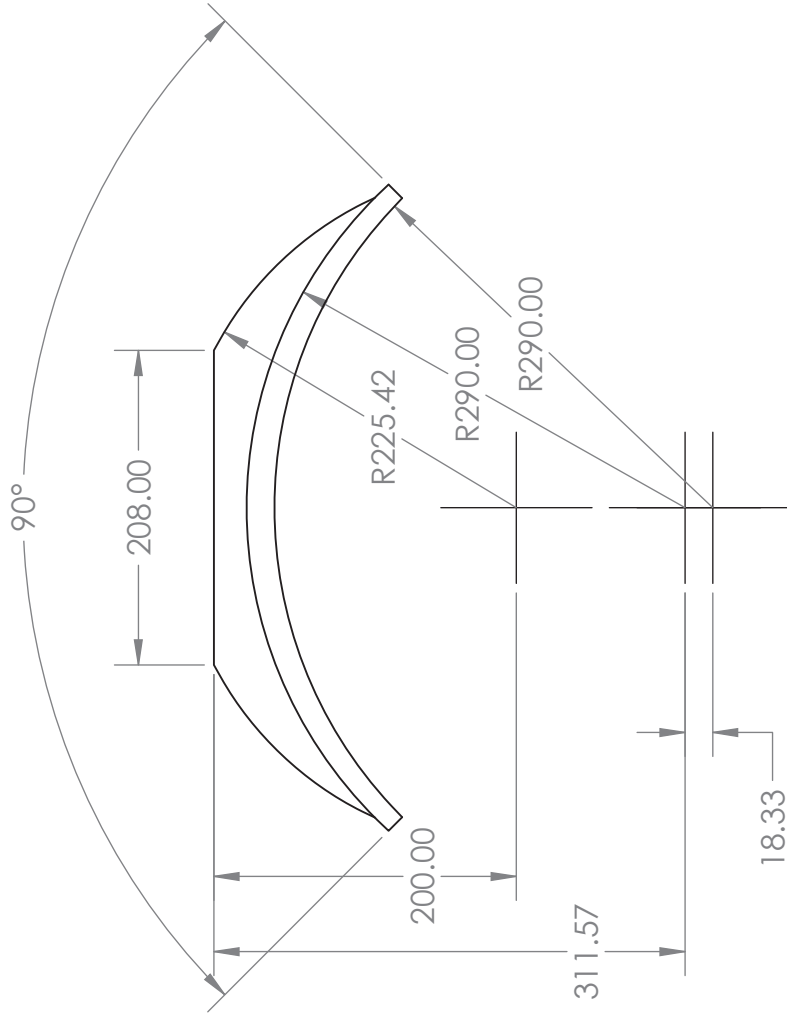


ALL DIMENSIONS ARE IN MM



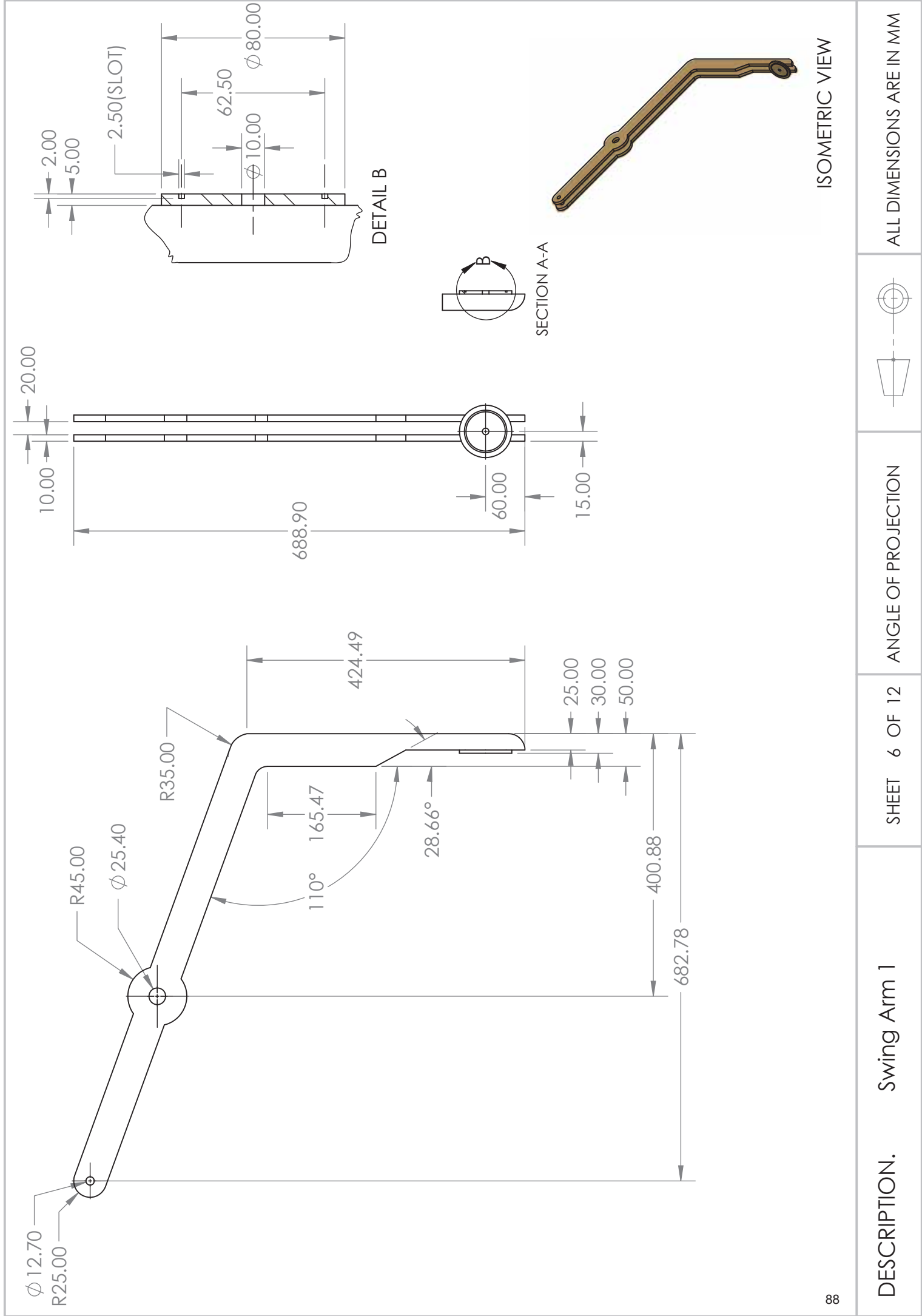
ISOMETRIC VIEW

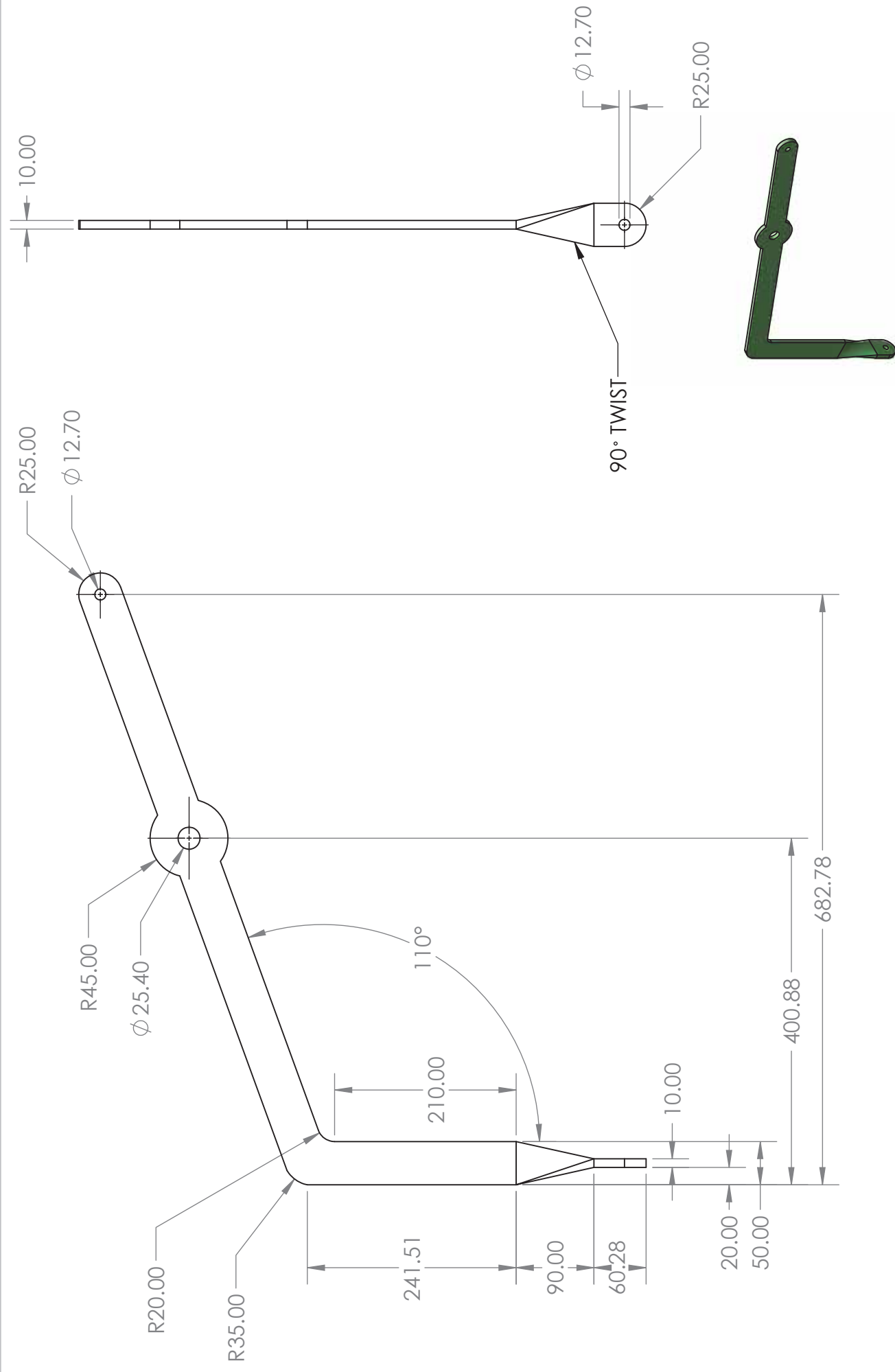
DESCRIPTION.	Claw Clamp 1	SHEET 4 OF 12	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



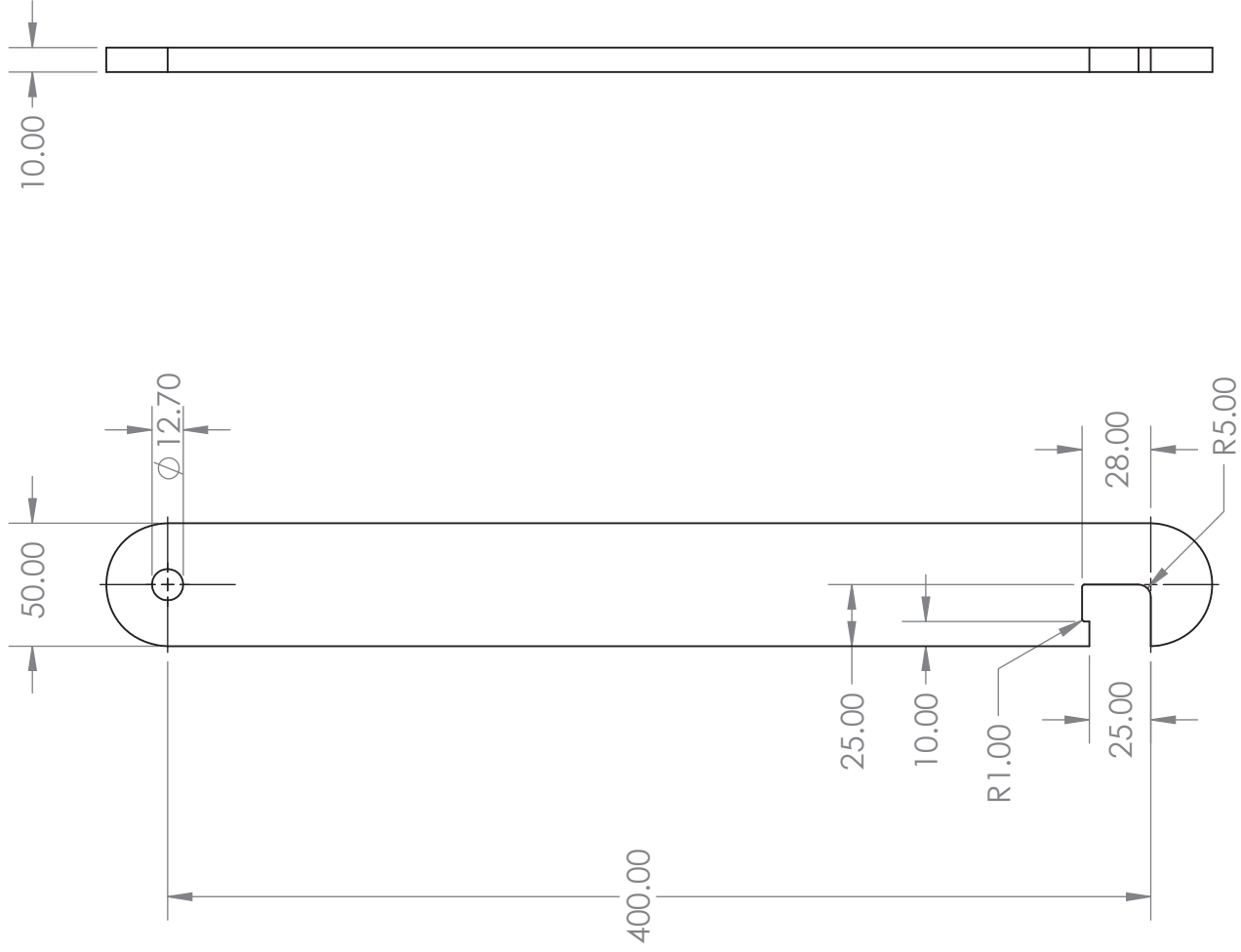




DESCRIPTION.	Swing Arm 2	SHEET 7 OF 12	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



DESCRIPTION.

Arm Link

SHEET

8 OF 12

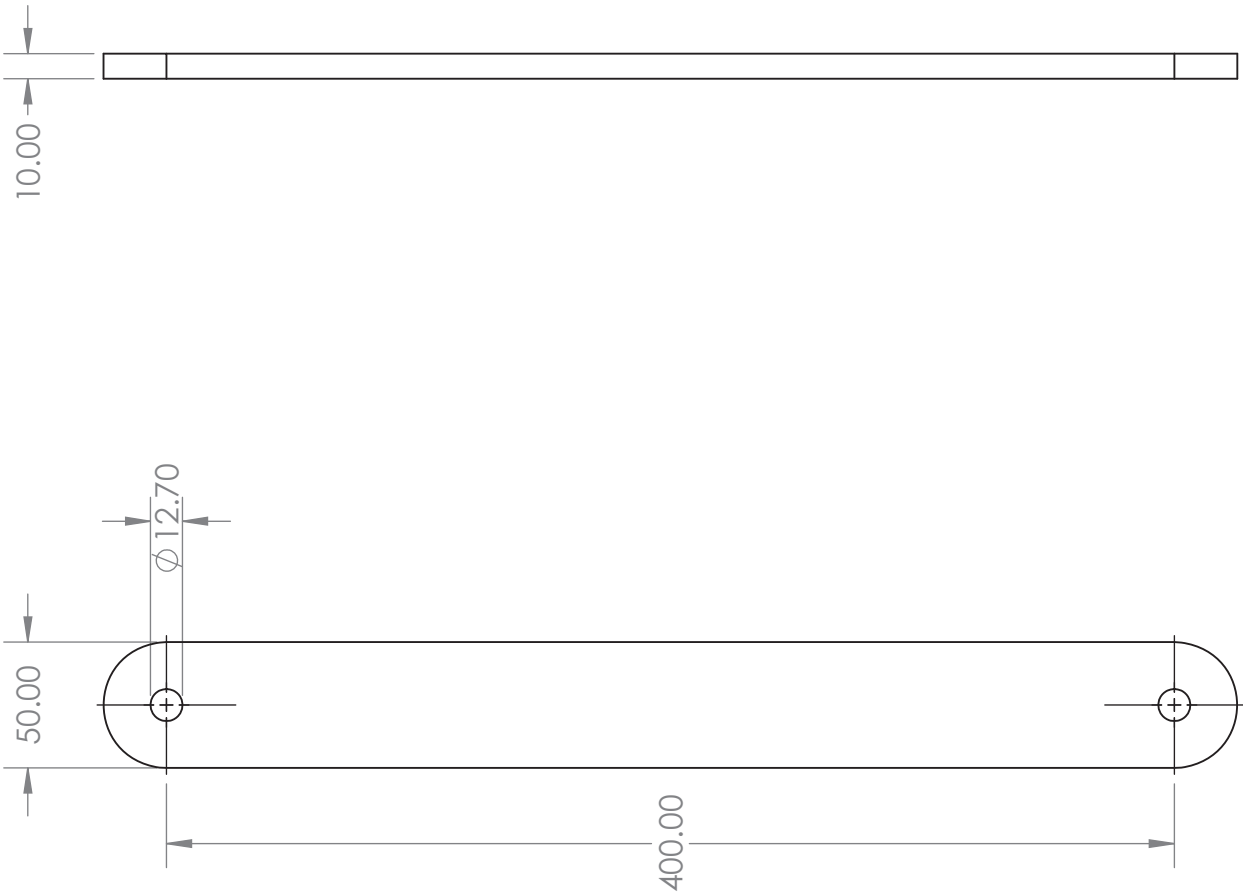
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



DESCRIPTION.

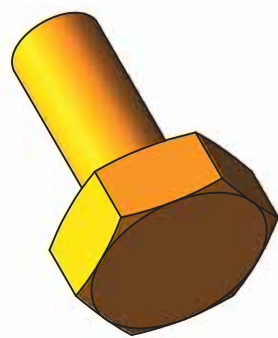
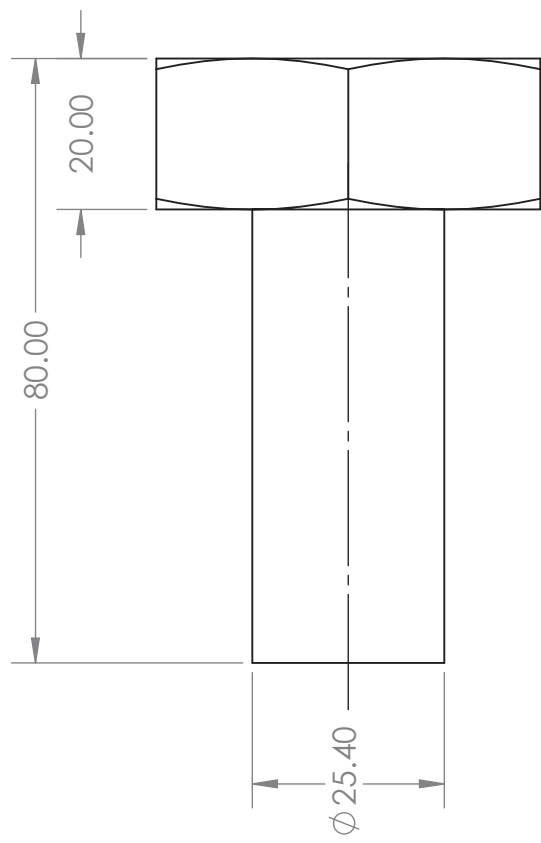
Link

SHEET 9 OF 12

ANGLE OF PROJECTION

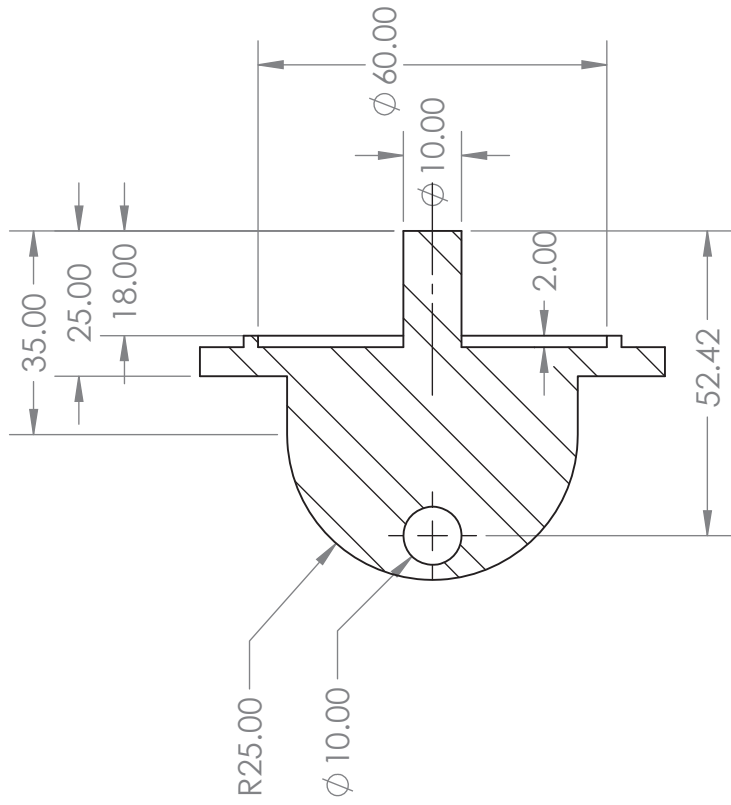


ALL DIMENSIONS ARE IN MM

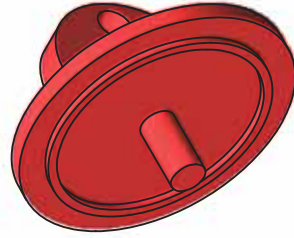


ISOMETRIC VIEW

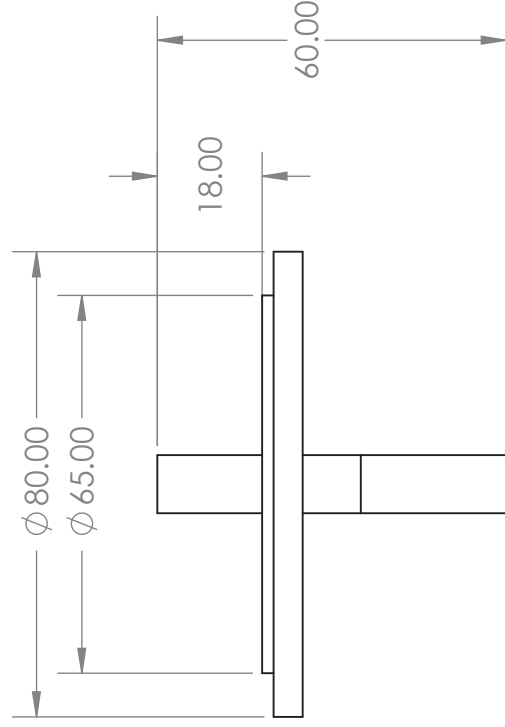
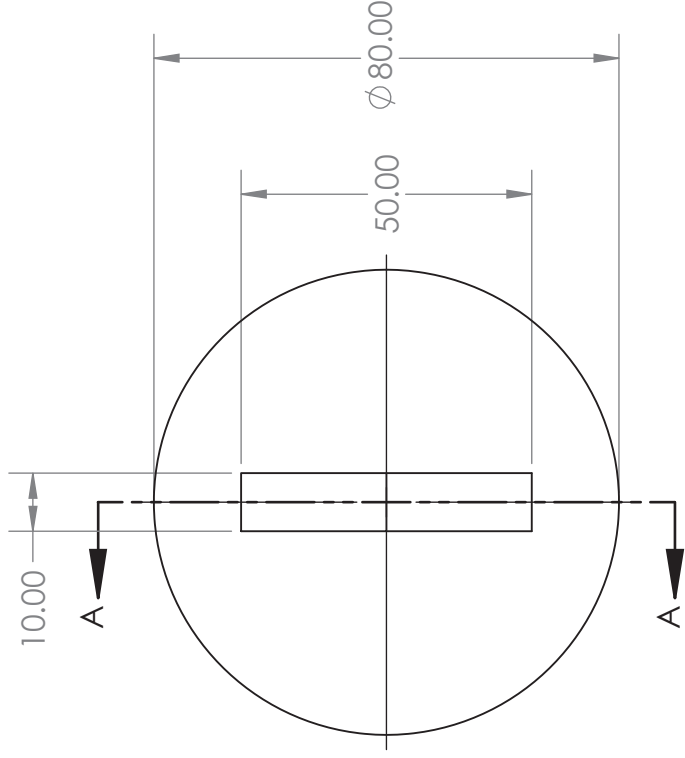
DESCRIPTION.	Bolt	SHEET 10 OF 12	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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SECTION A-A



ISOMETRIC VIEW



DESCRIPTION.

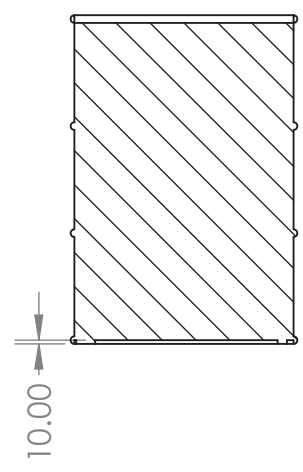
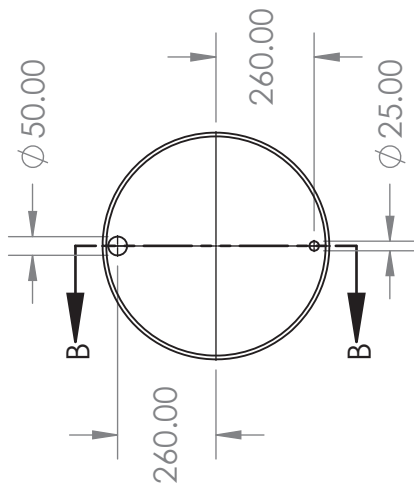
Eye Bolt

SHEET 11 OF 12

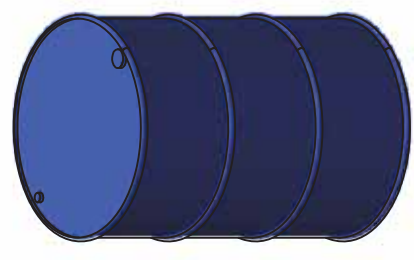
ANGLE OF PROJECTION



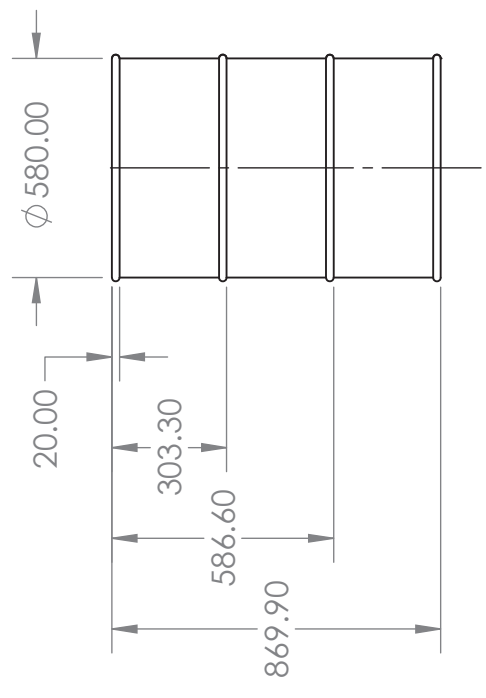
ALL DIMENSIONS ARE IN MM



SECTION B-B



ISOMETRIC VIEW



DESCRIPTION.

Drum

SHEET 12 OF 12

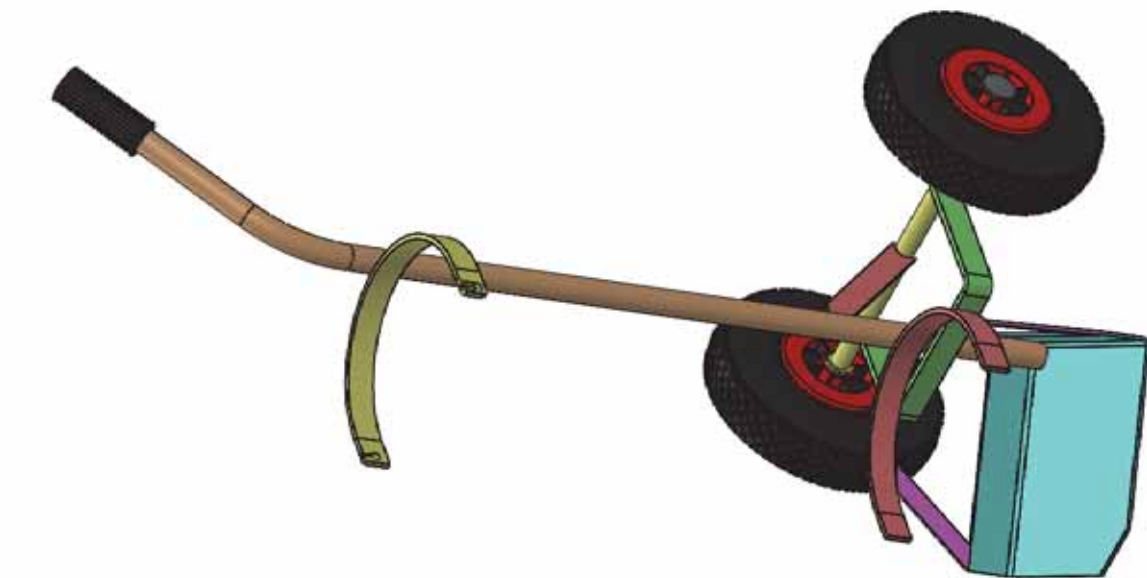
ANGLE OF PROJECTION



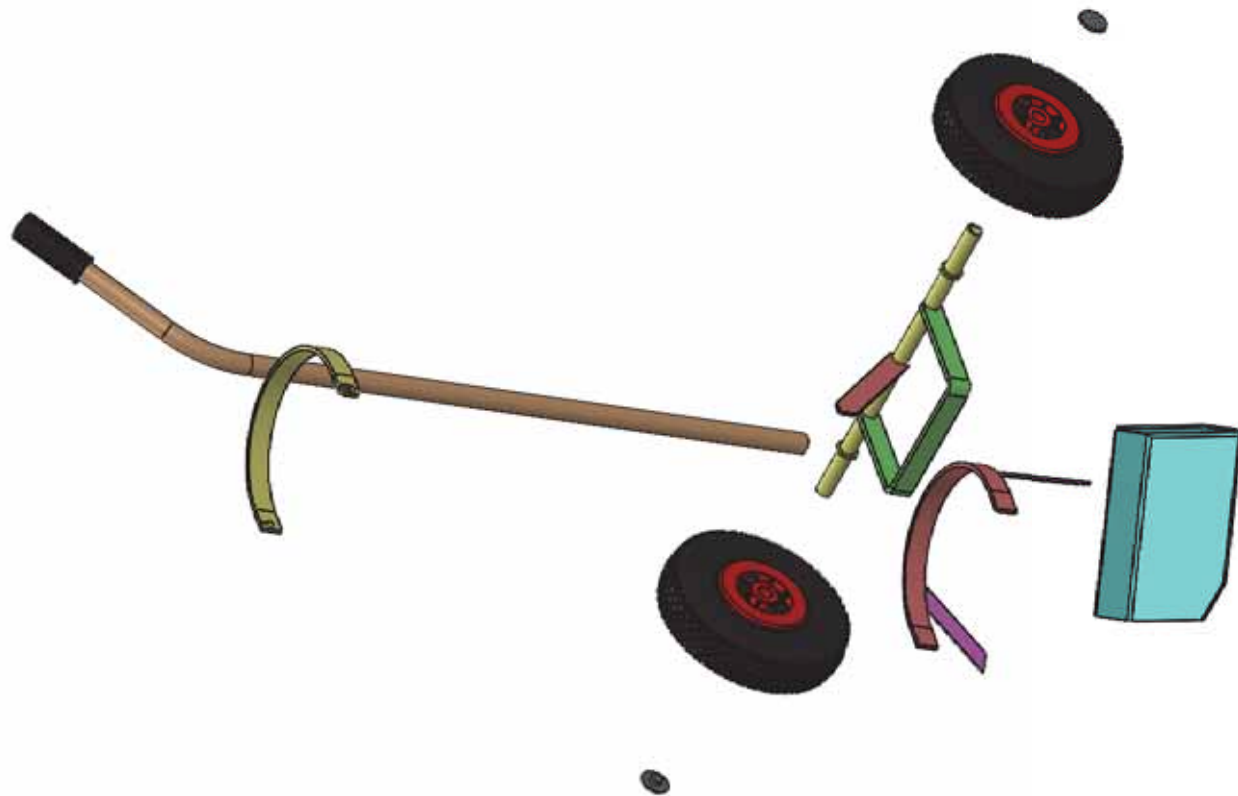
ALL DIMENSIONS ARE IN MM

GAS CYLINDER HAND TRUCK





NORMAL ASSEMBLY



EXPLODED VIEW

DESCRIPTION: Gas Cylinder Hand Truck - Exploded view

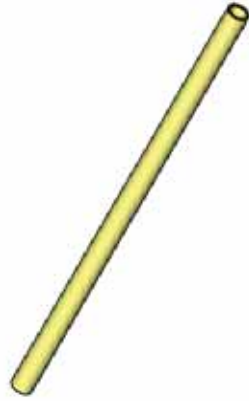
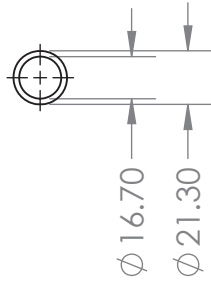
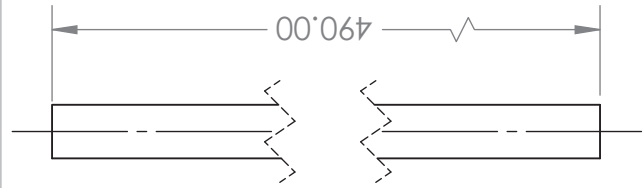
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



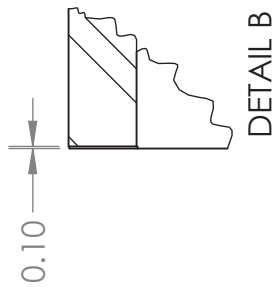
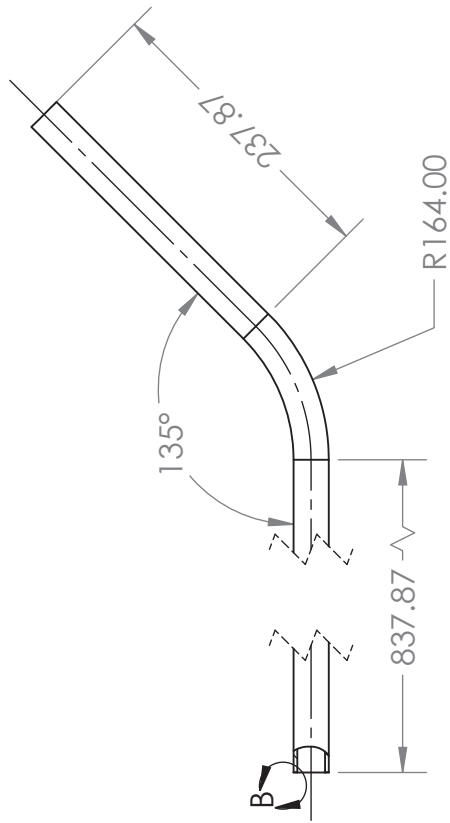
ISOMETRIC VIEW

ALL DIMENSIONS ARE IN MM

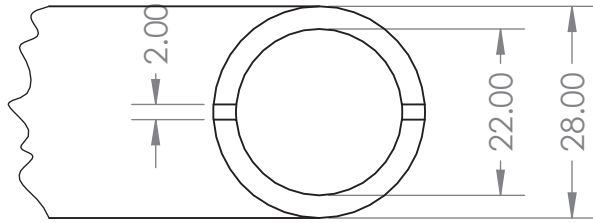


ANGLE OF PROJECTION

SHEET 1 OF 1

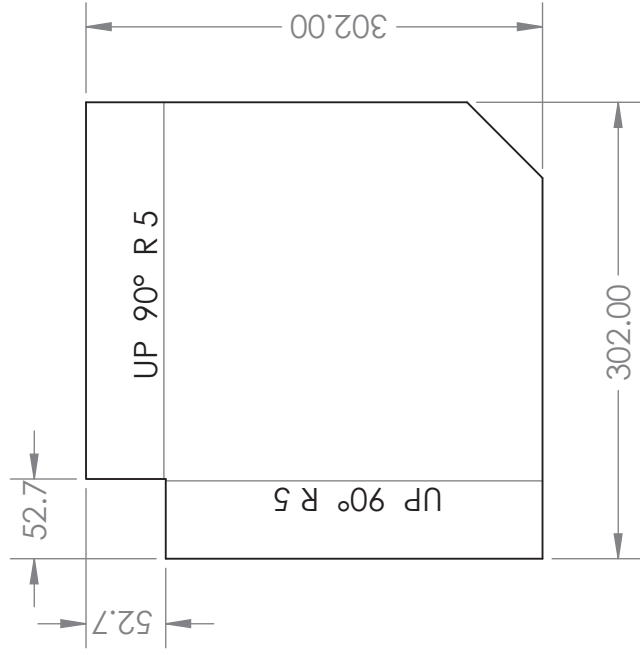
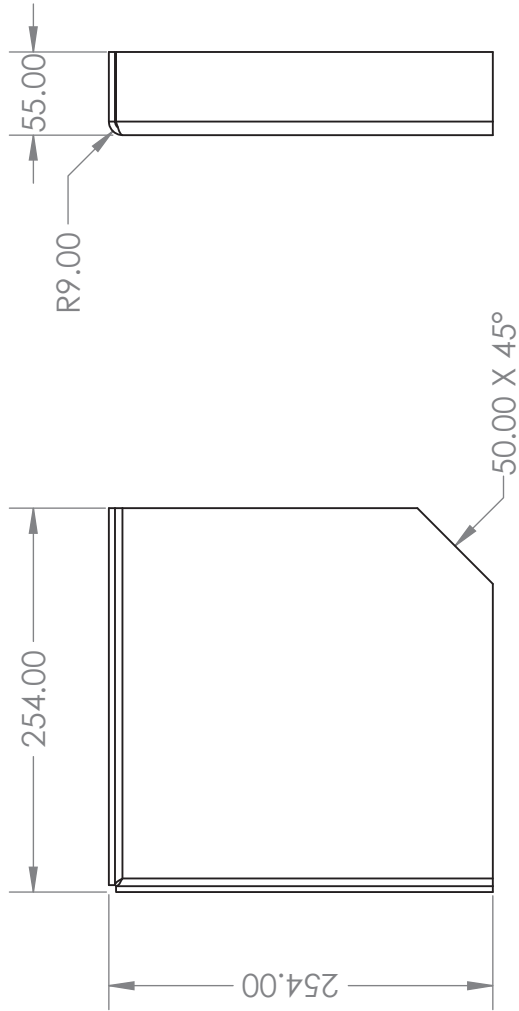


ISOMETRIC VIEW



DETAIL A

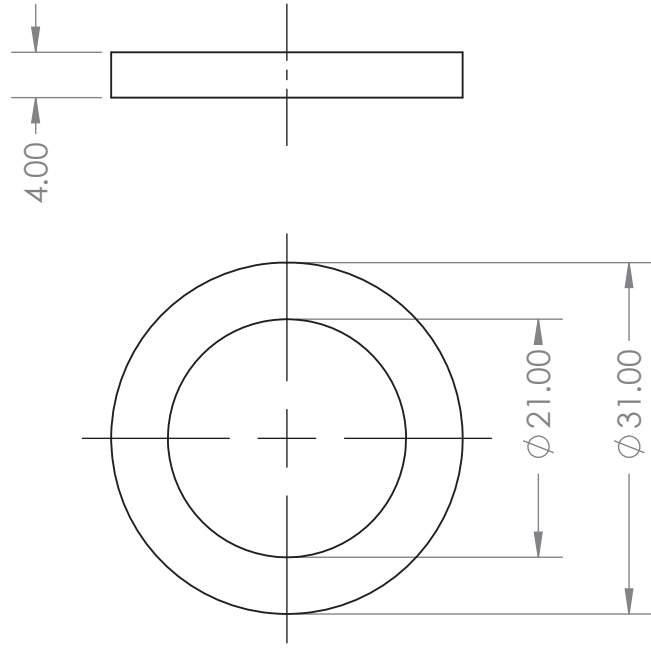
DESCRIPTION. Frame 2



FLAT PATTERN VIEW

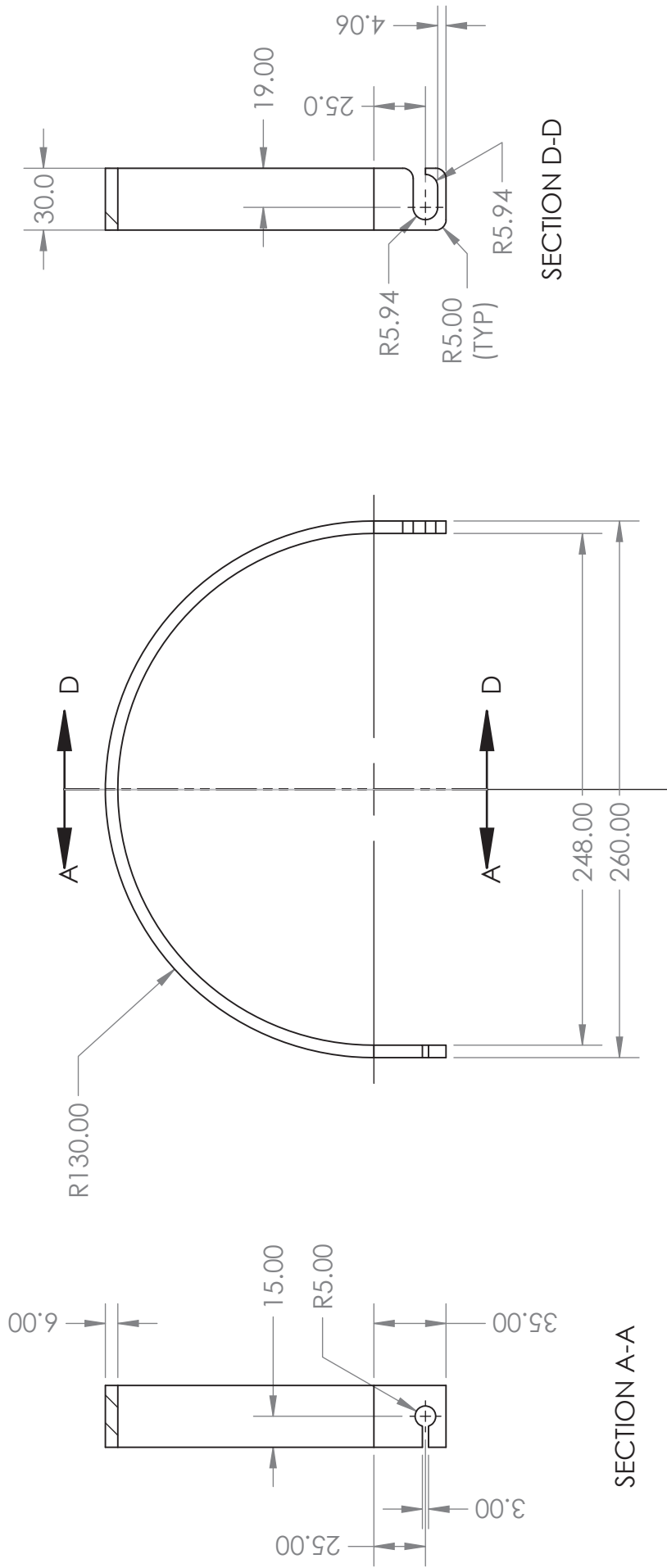


ISOMETRIC VIEW



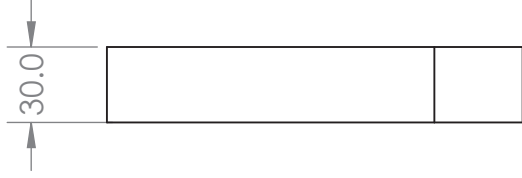
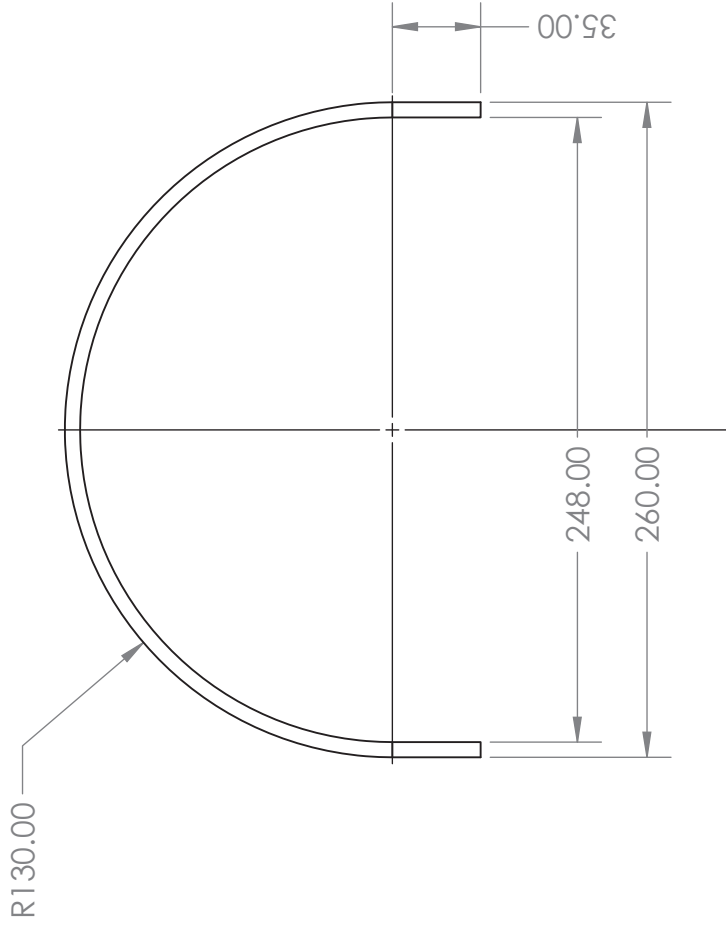
ISOMETRIC VIEW

DESCRIPTION.	Base & Support	SHEET 1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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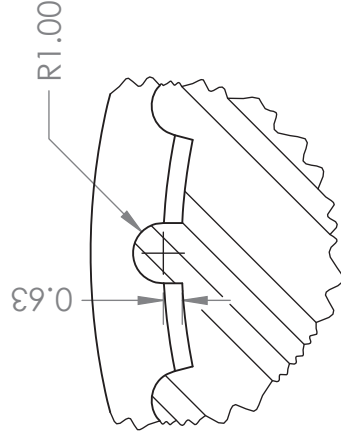
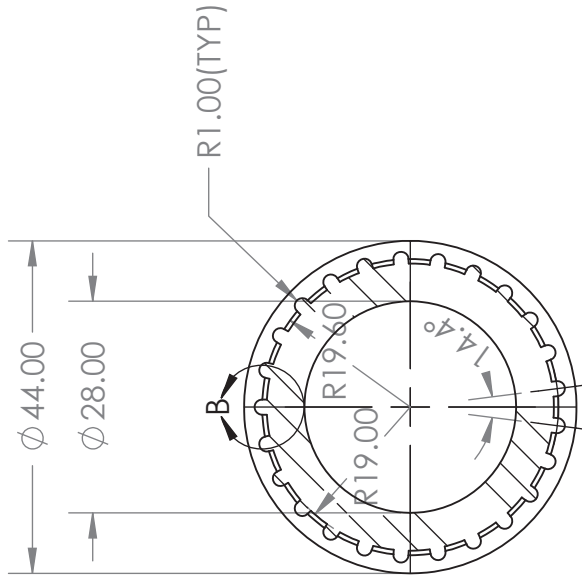
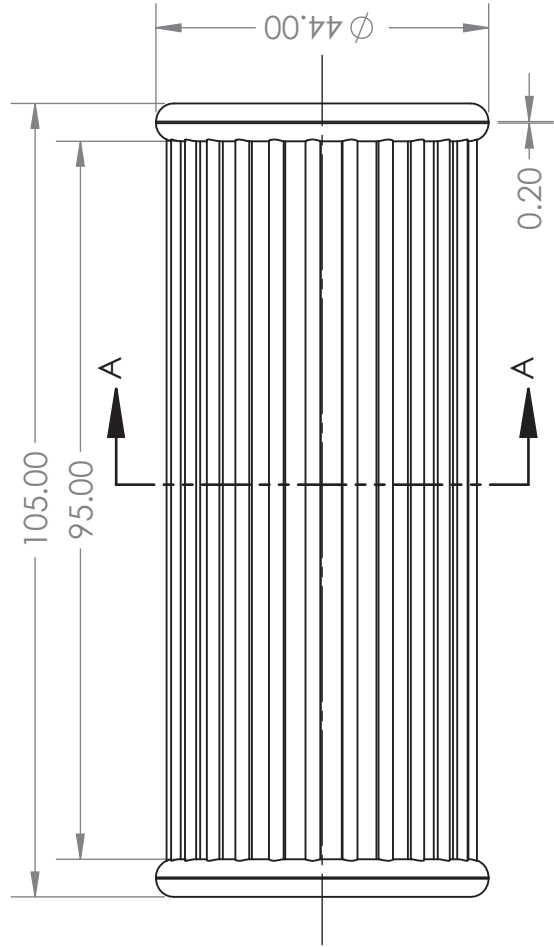
ISOMETRIC VIEW





ISOMETRIC VIEW





DETAIL B

ISOMETRIC VIEW

DESCRIPTION.

Handle Grip

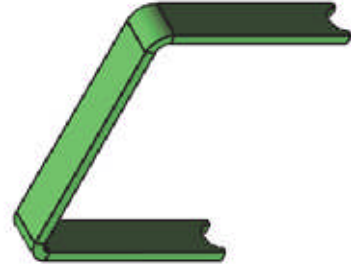
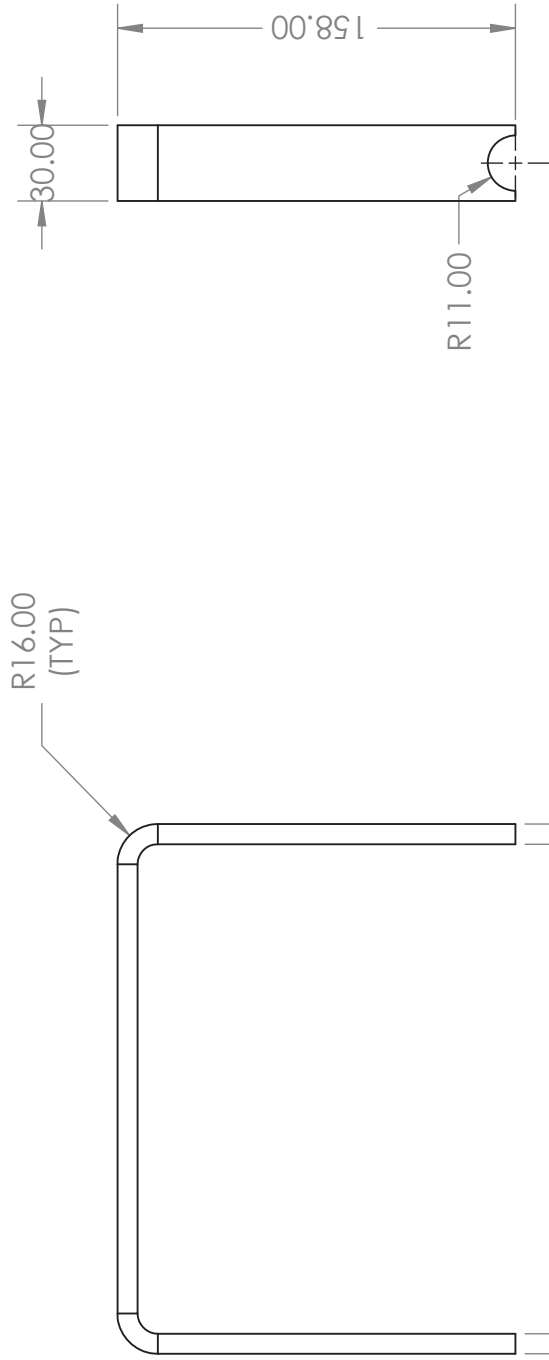
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION. Support Bracket 1

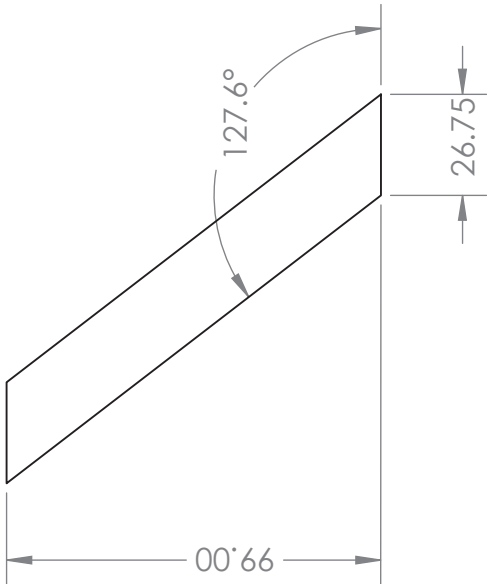
SHEET

1 OF 1

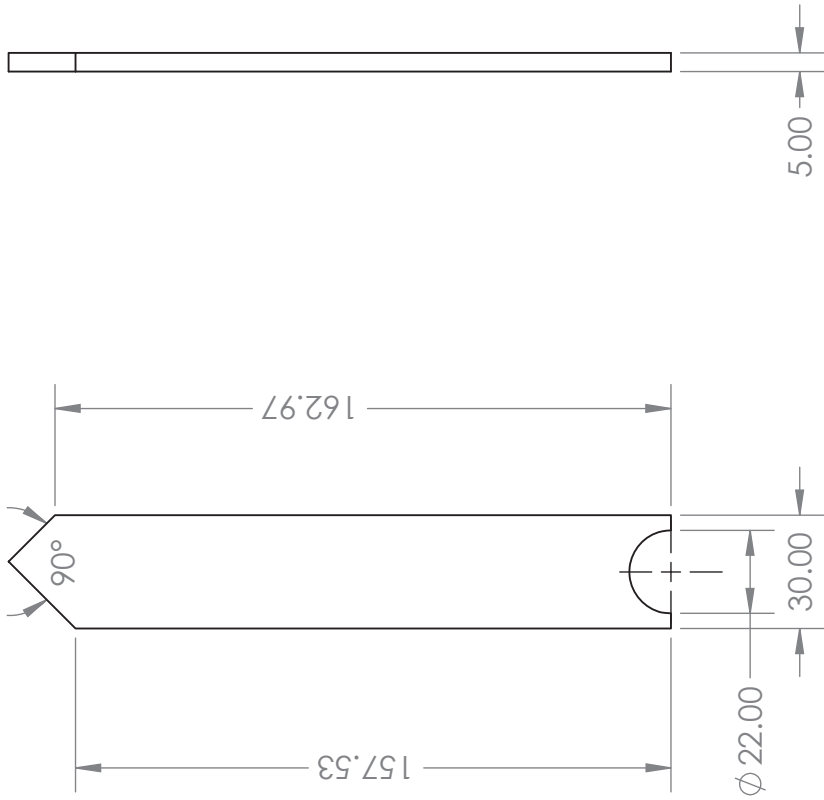
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Support

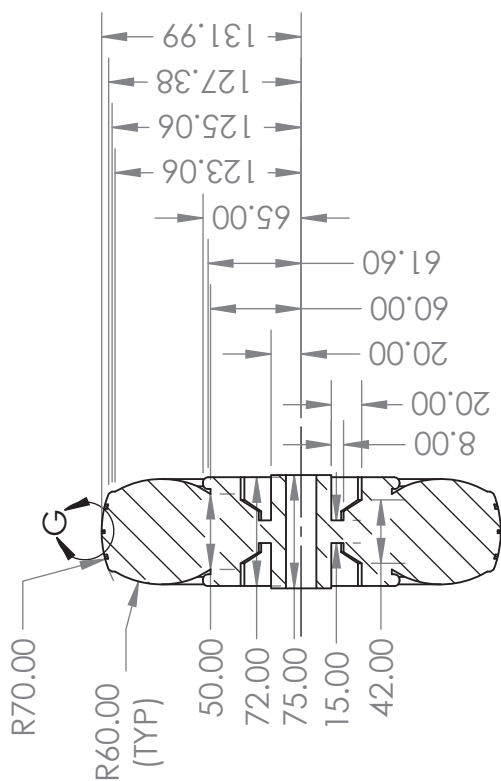
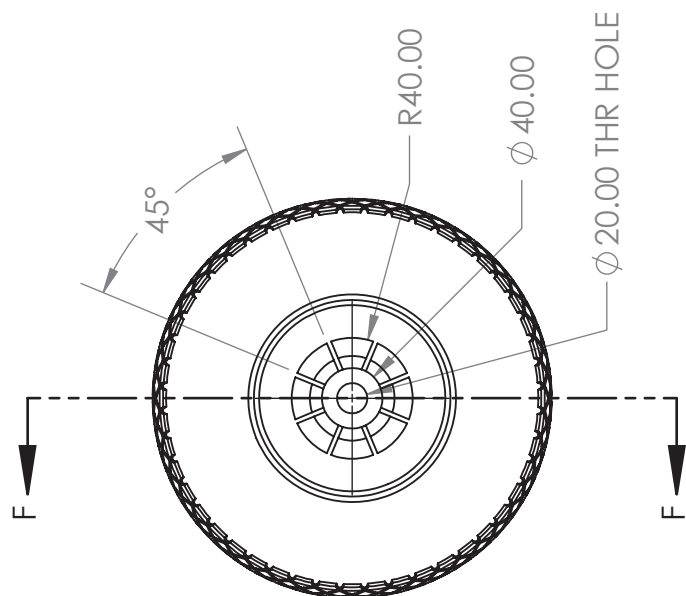
SHEET

1 OF 1

ANGLE OF PROJECTION



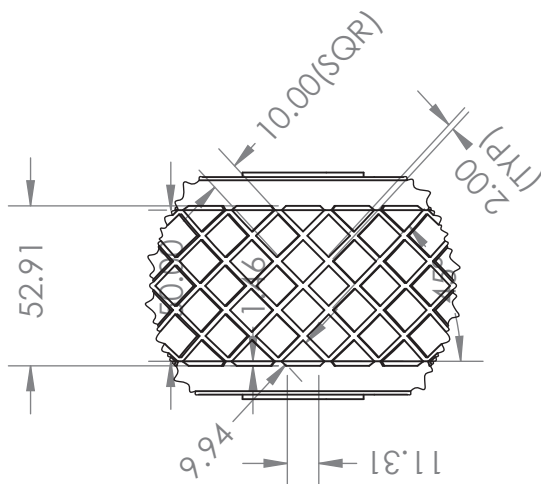
ALL DIMENSIONS ARE IN MM



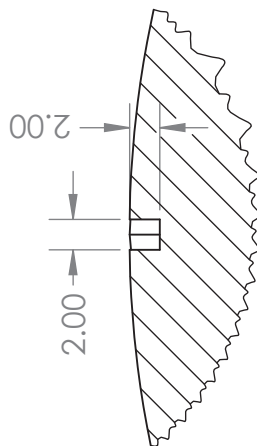
SECTION F-F



ISOMETRIC VIEW



DETAIL D



DETAIL G

DESCRIPTION.

Wheel 260mm

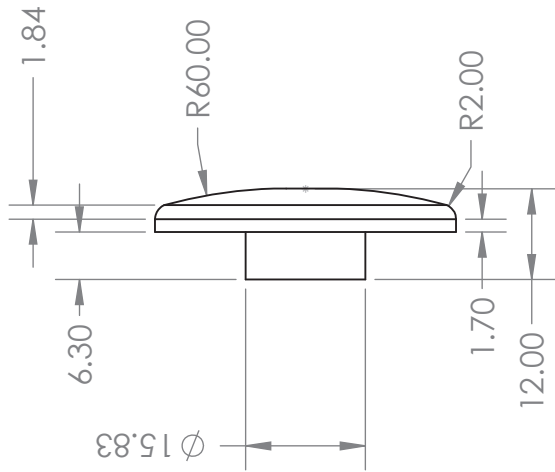
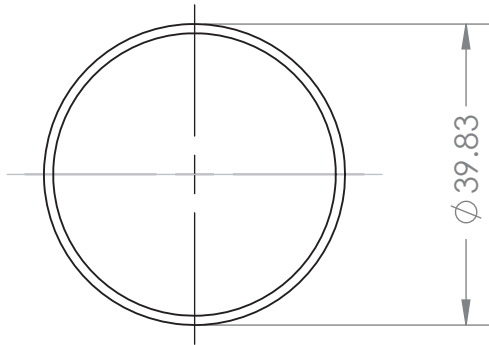
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

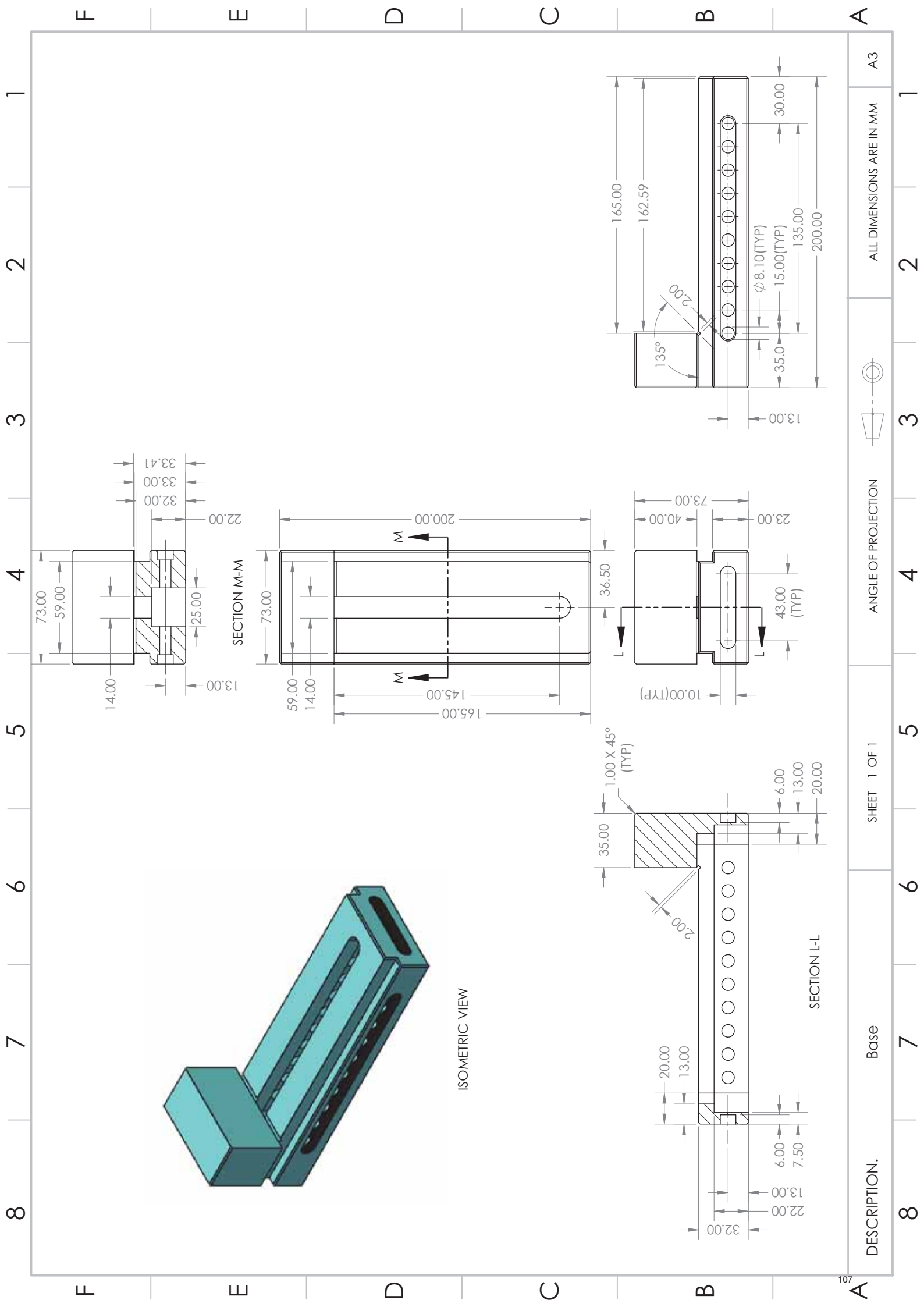


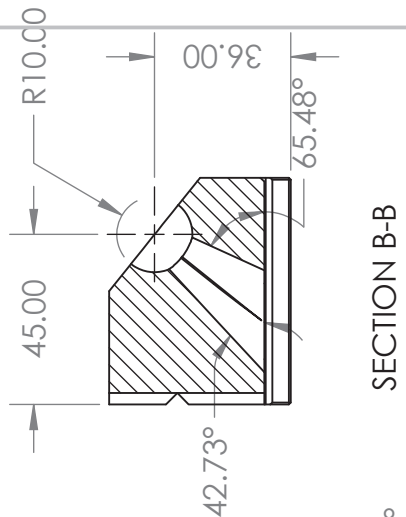
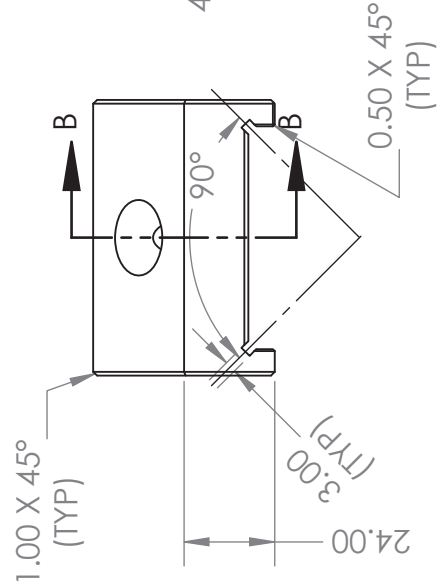
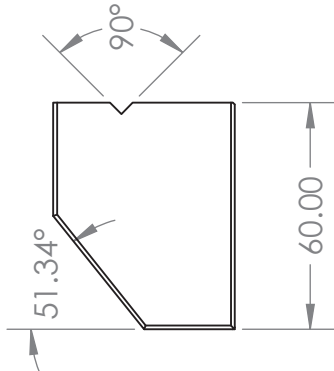
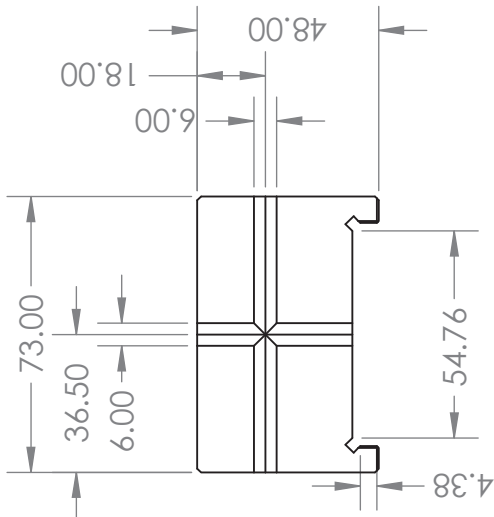
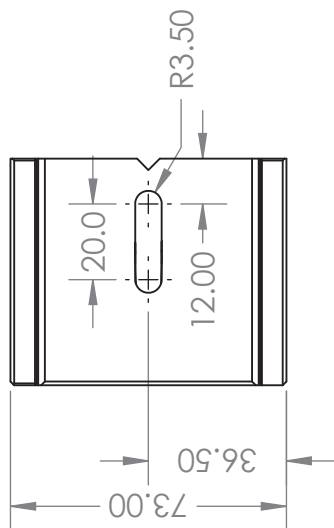
ISOMETRIC VIEW

DESCRIPTION.	End Cap	SHEET 1 OF 1	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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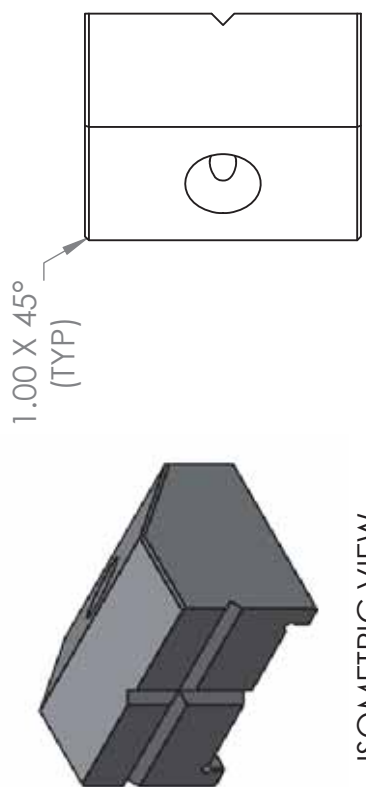
PRECISION GRINDING VICE





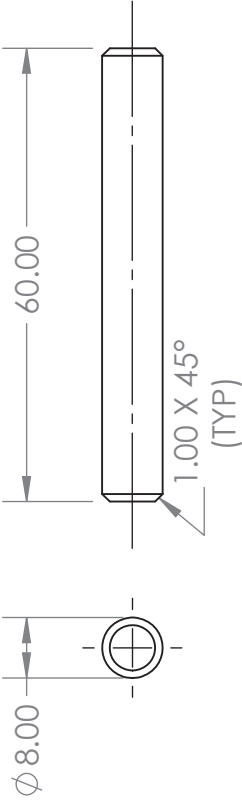
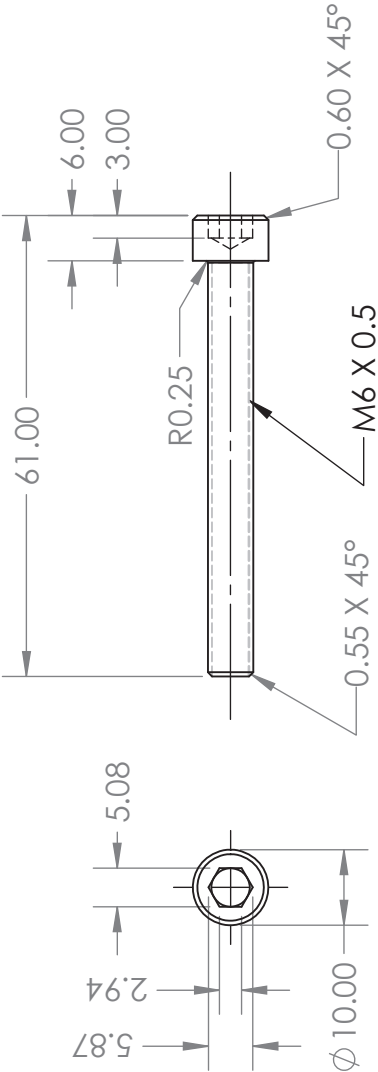


SECTION B-B

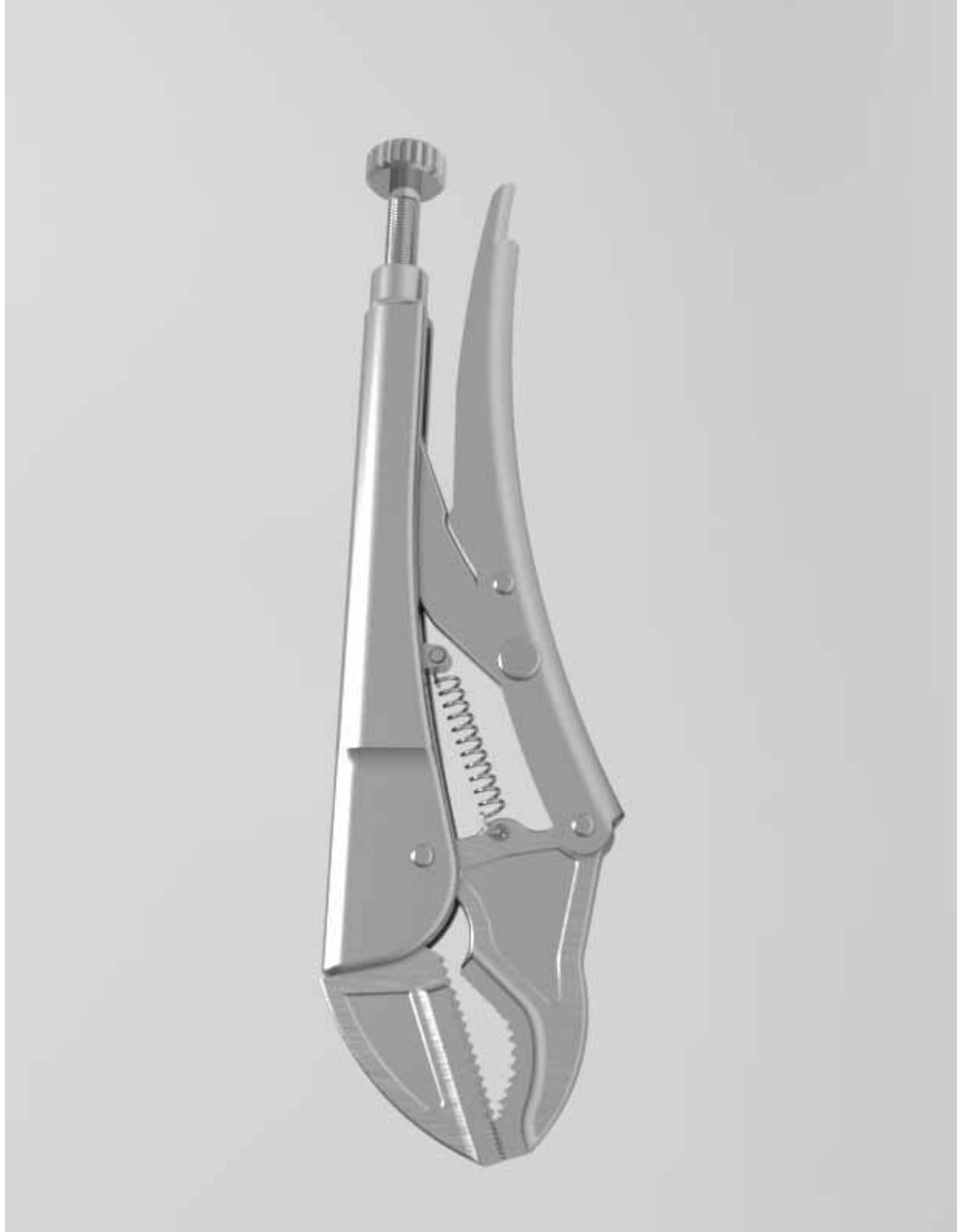


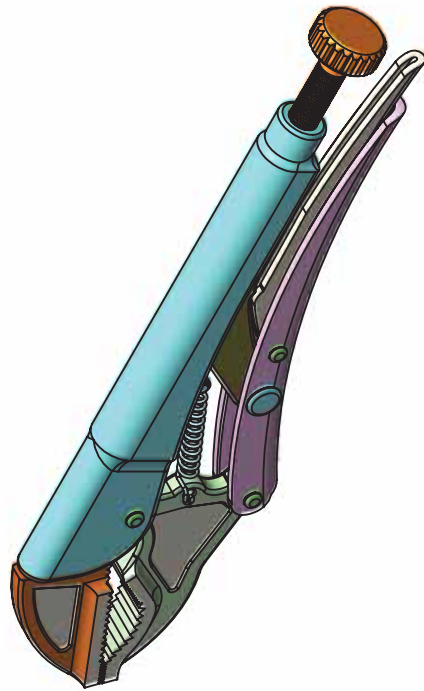
ISOMETRIC VIEW

DESCRIPTION.	Movable Jaw	SHEET	1 OF 1	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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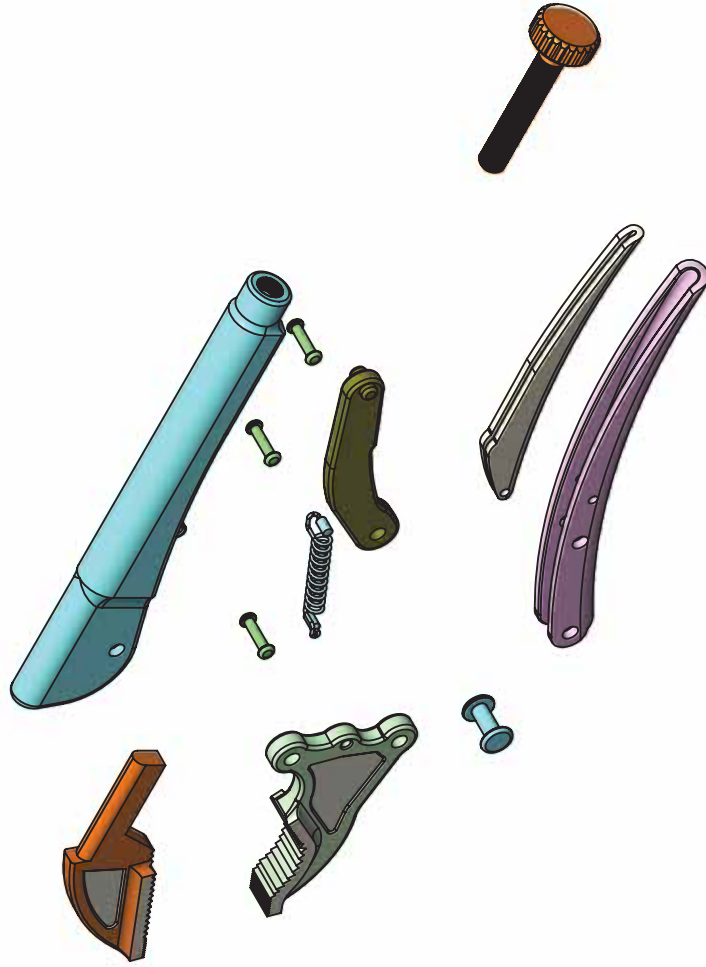
		ALL DIMENSIONS ARE IN MM
 ISOMETRIC VIEW	 ISOMETRIC VIEW	DESCRIPTION. socket head cap screw & cylindrical pin
1 OF 1	ANGLE OF PROJECTION	SHEET

GRIP PLIER

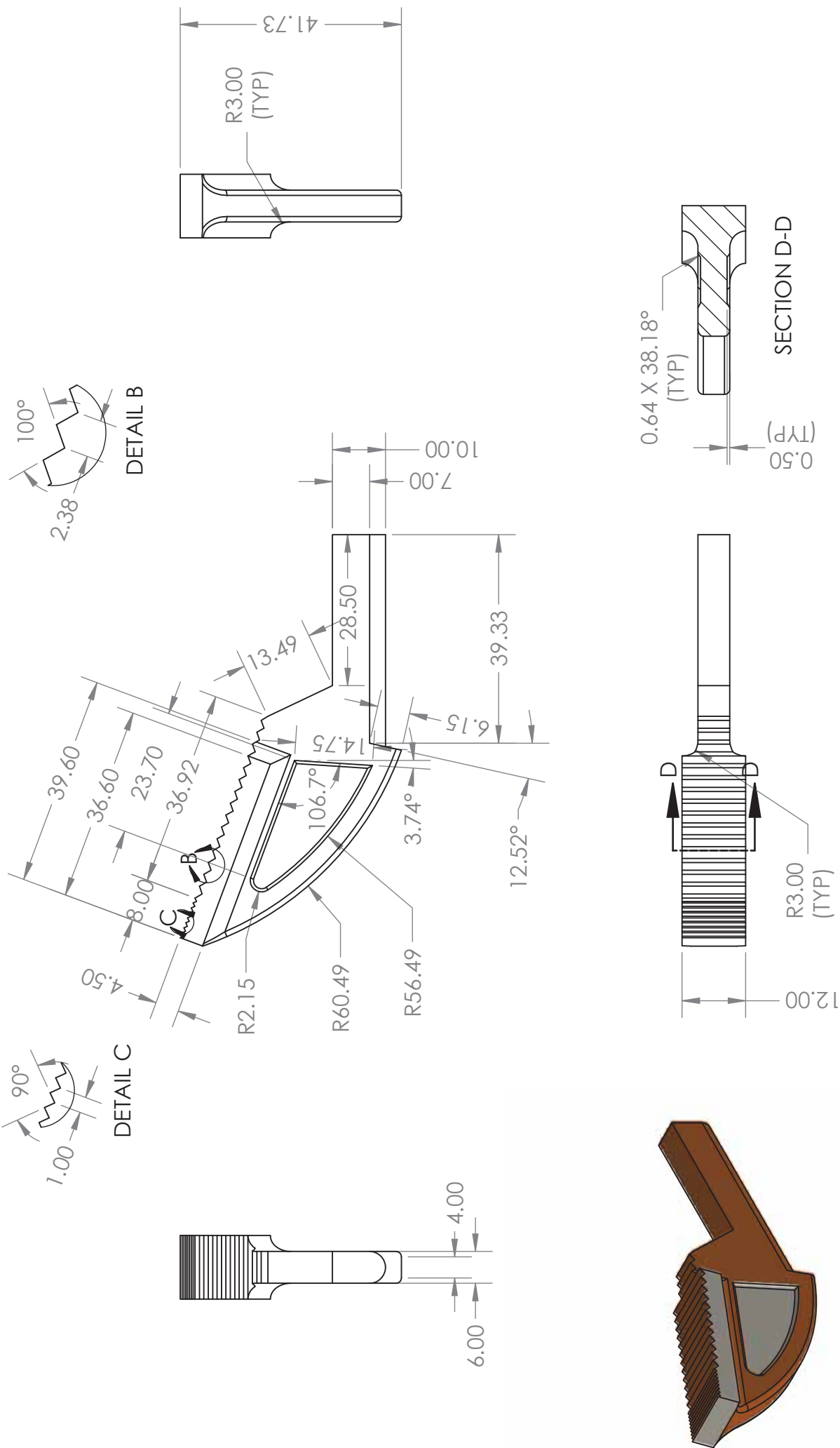




GENERAL ASSEMBLY



EXPLODED VIEW



ISOMETRIC VIEW

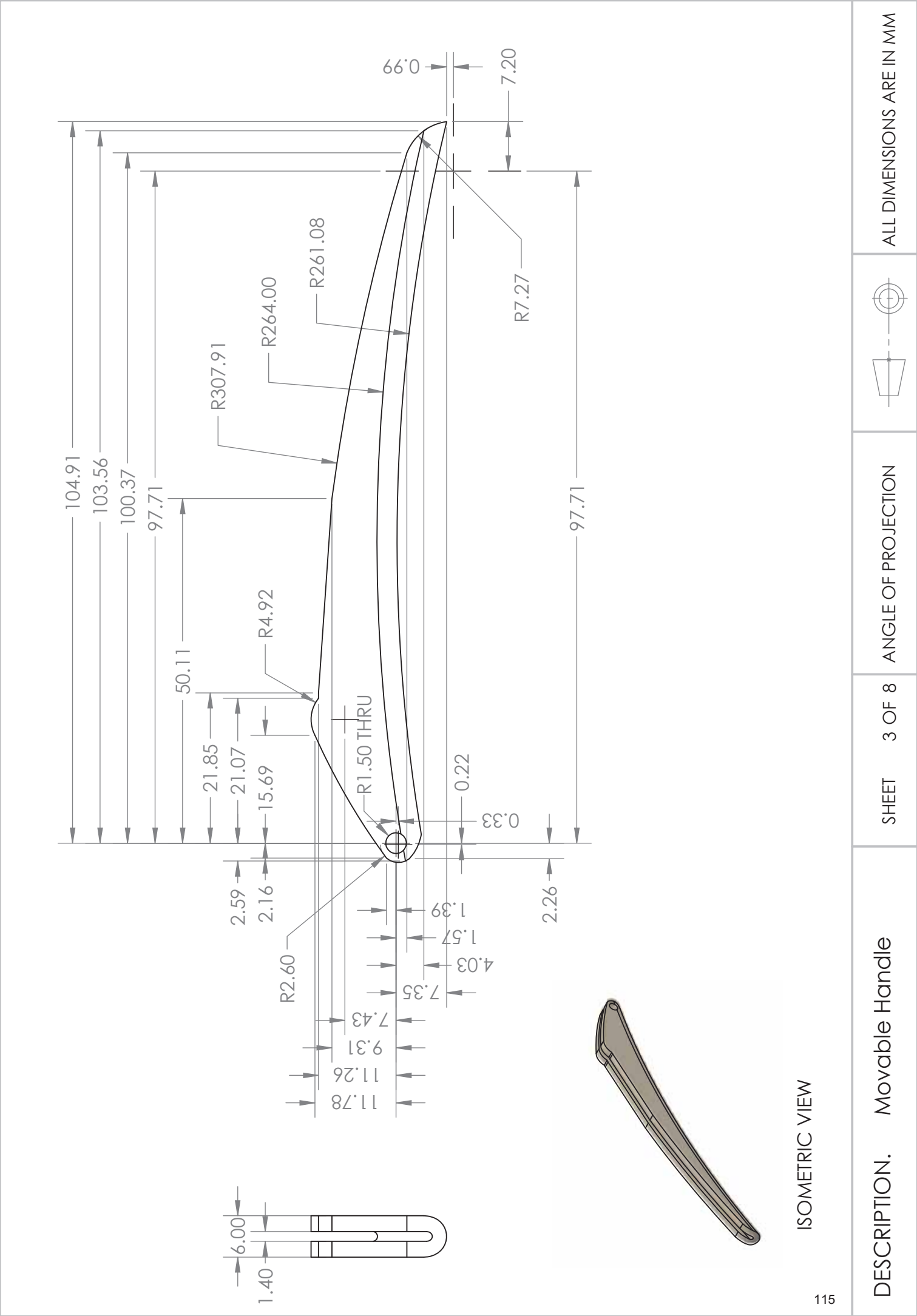
ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

SHEET 1 OF 8

DESCRIPTION. Fixed Jaw



ISOMETRIC VIEW

DESCRIPTION. Movable Handle

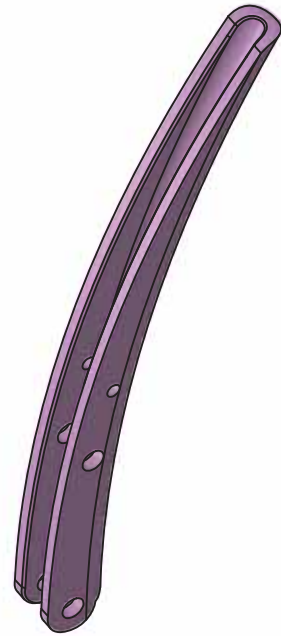
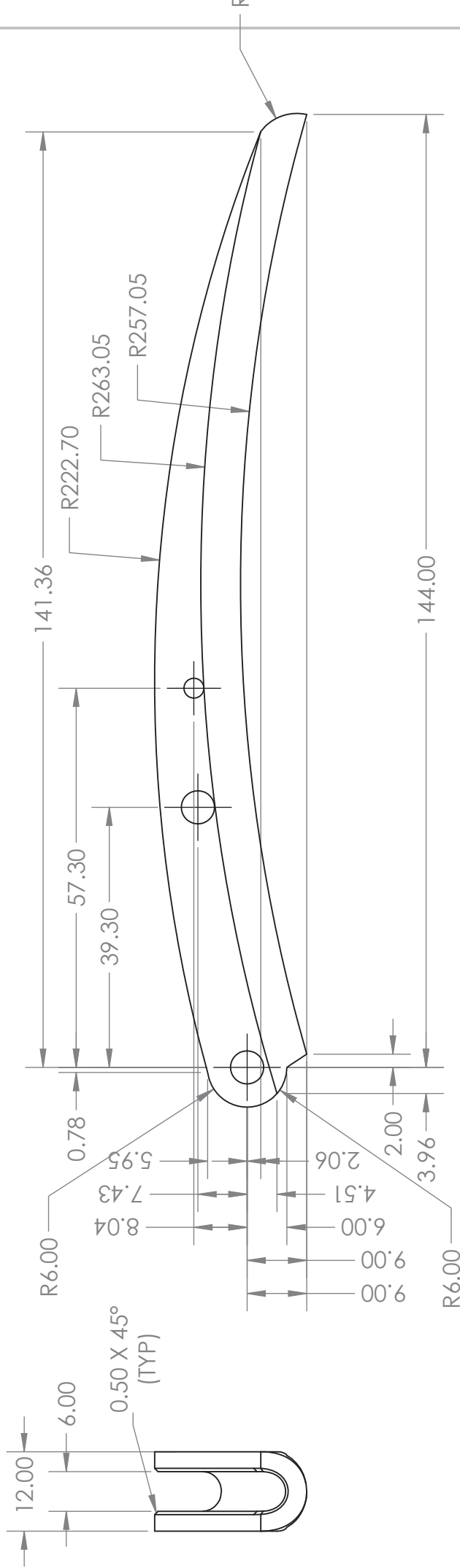
SHEET

3 OF 8

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Locking Lever

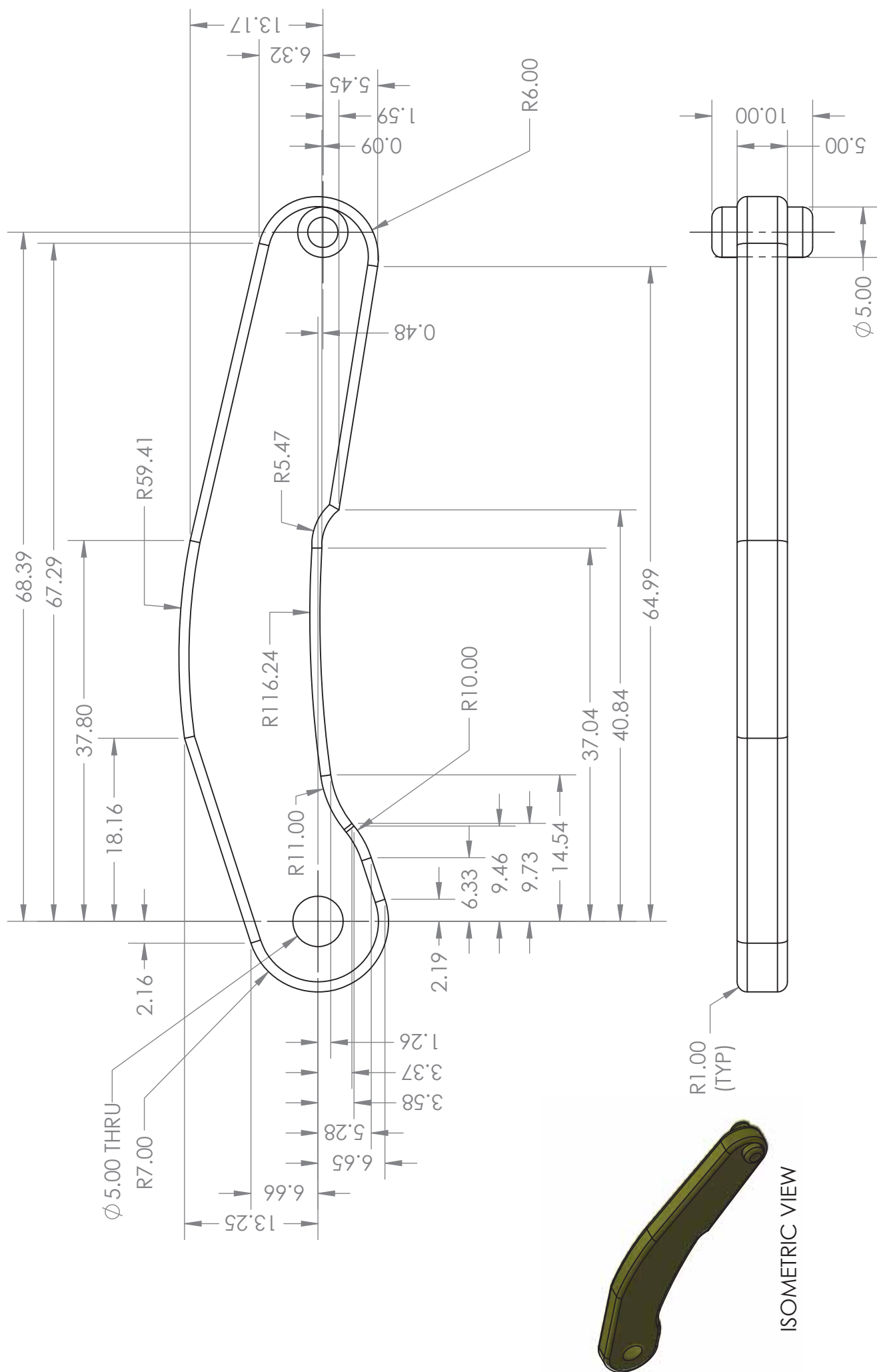
SHEET

5 OF 8

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION.	Link	SHEET 6 OF 8	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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Orthographic views of a rivet. Front view shows diameters of 10.00 and 8.00. Side view shows a cylindrical body with a diameter of 5.00 and a length of 15.00. The head has a radius of 1.00 and a chamfer of 0.20 x 45°.

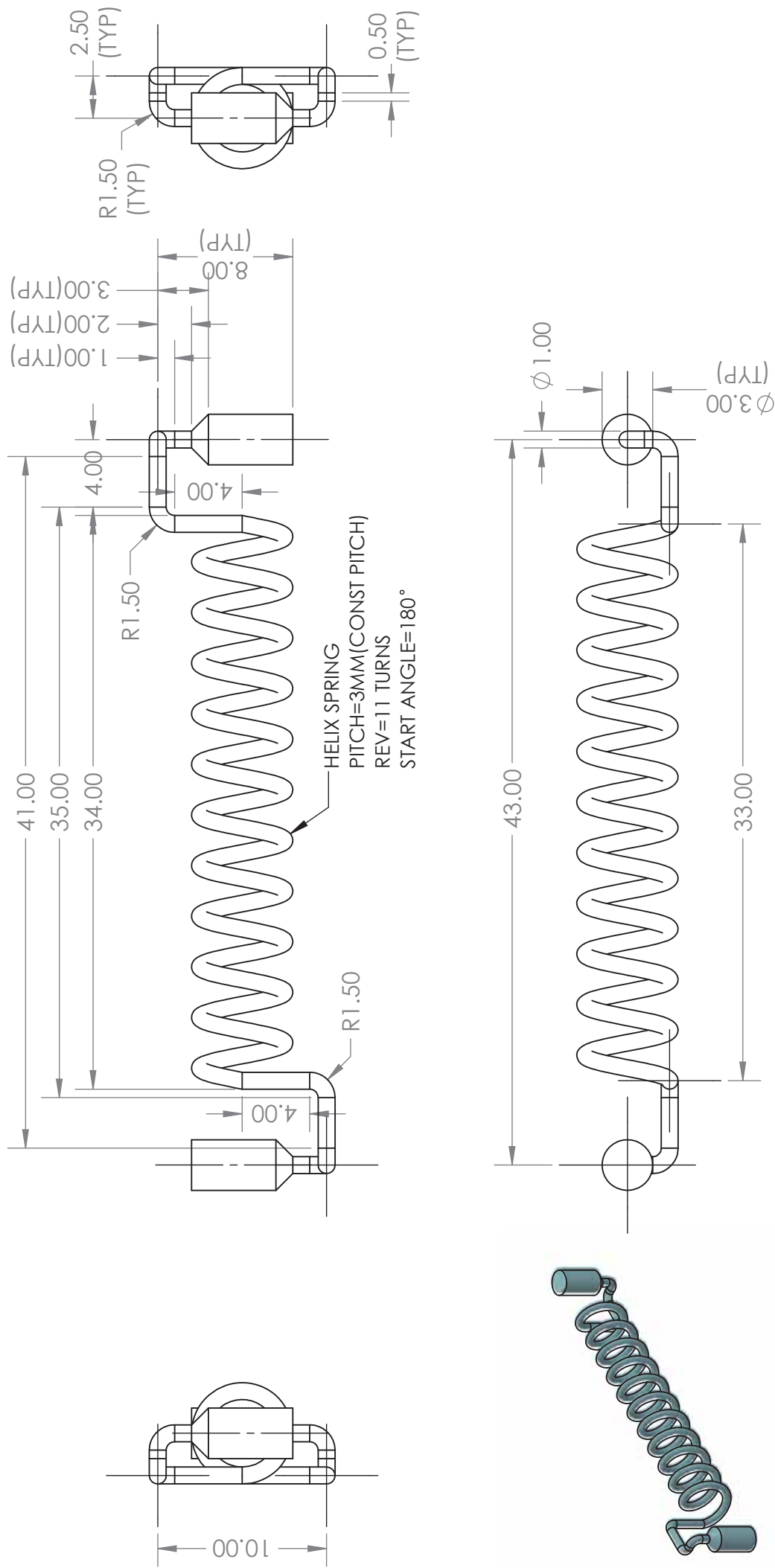
ISOMETRIC VIEW

Orthographic views of a screw. Front view shows diameters of 5.00 and 3.00. Side view shows a cylindrical body with a diameter of 3.00 and a length of 15.00. The head has a radius of 1.00 and a chamfer of 0.20 x 45°.

ISOMETRIC VIEW

Orthographic views of a bolt. Front view shows diameters of 20.00 and 17.47. Side view shows a cylindrical body with a diameter of 17.47 and a length of 58.00. The head has a radius of 10.00 and a chamfer of 1.27 x 45°. Detail D shows a cross-section of the head with a diameter of 17.47, a radius of 10.00, and a chamfer of 1.24 at an angle of 87.63°.

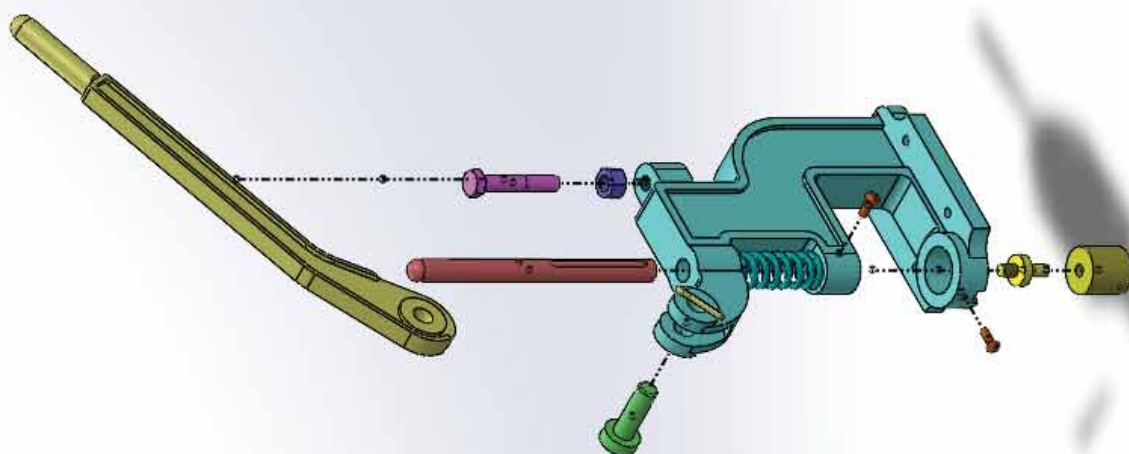
ISOMETRIC VIEW

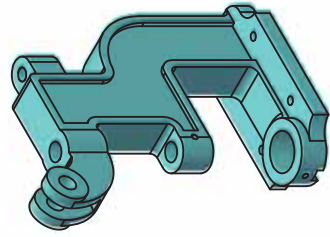
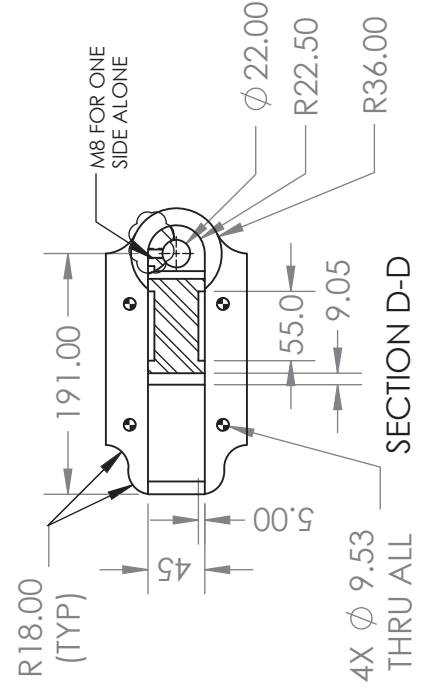
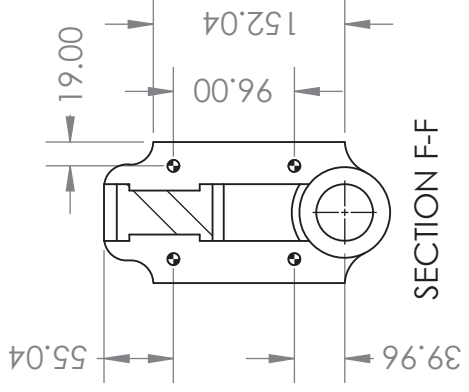
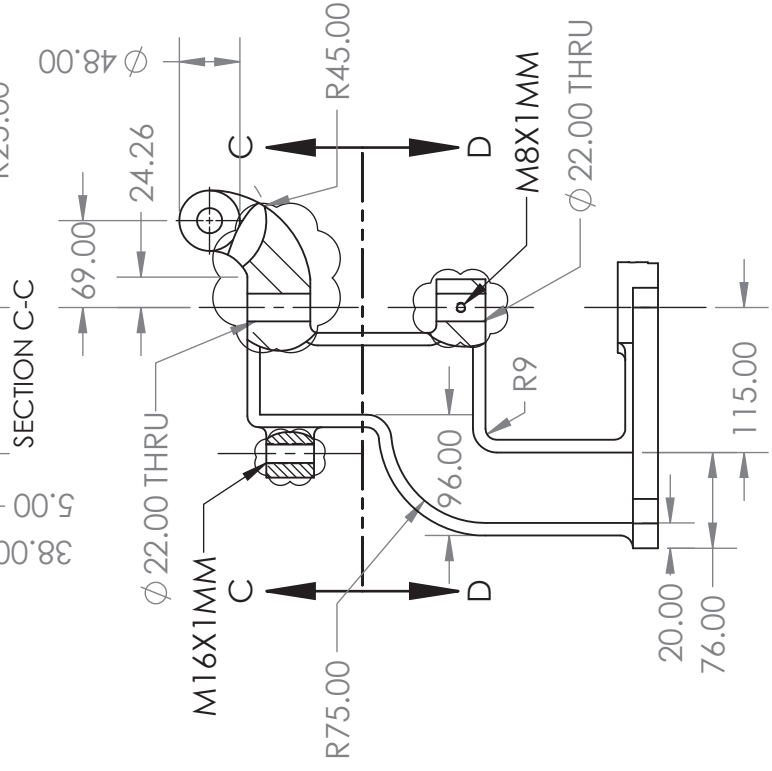
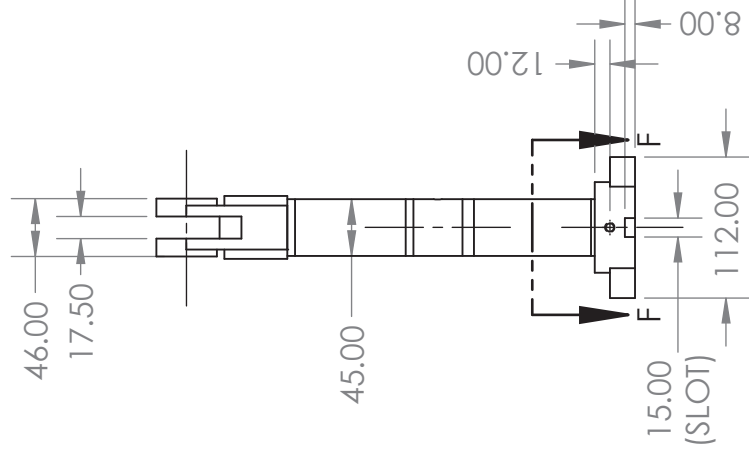
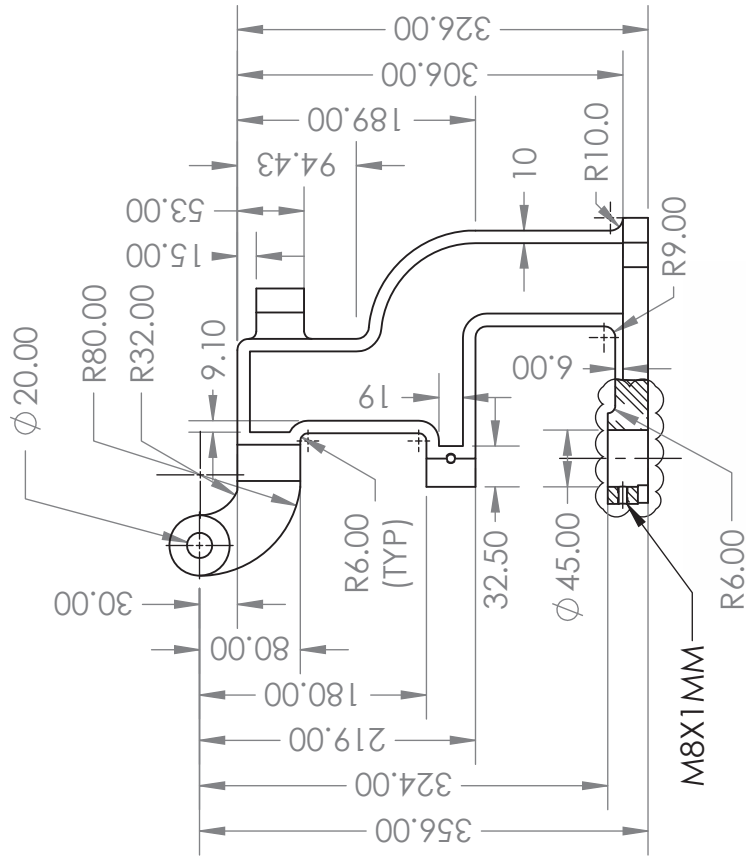


DESCRIPTION.	Spring	SHEET 8 OF 8	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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HAND PUNCHING MACHINE







ISOMETRIC VIEW

DESCRIPTION.

Frame

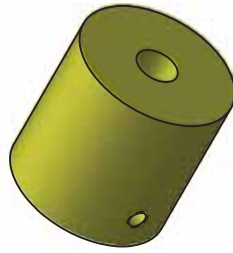
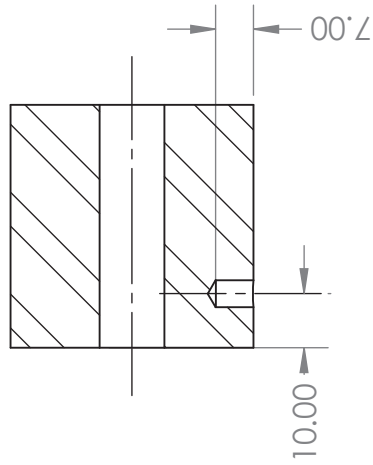
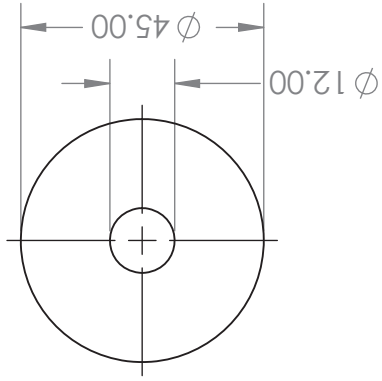
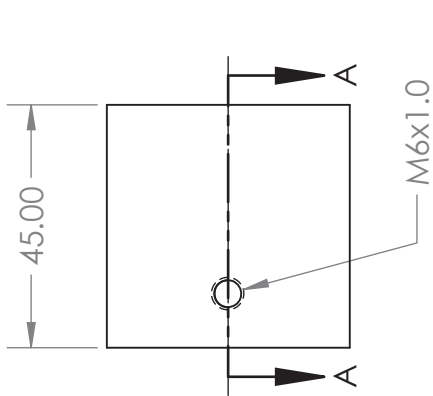
SHEET

1 OF 7

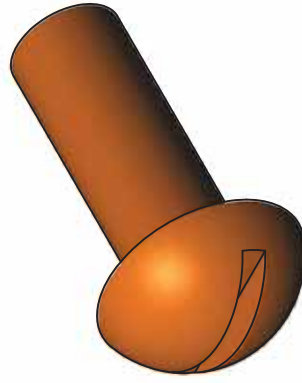
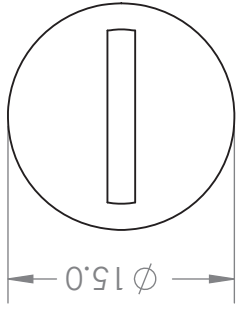
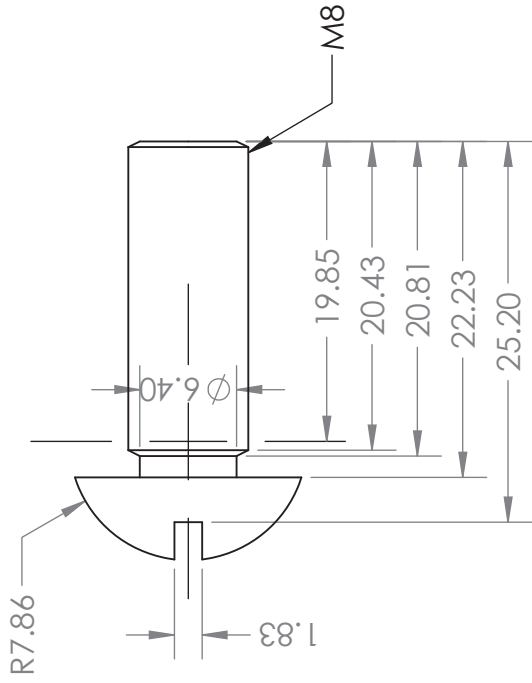
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

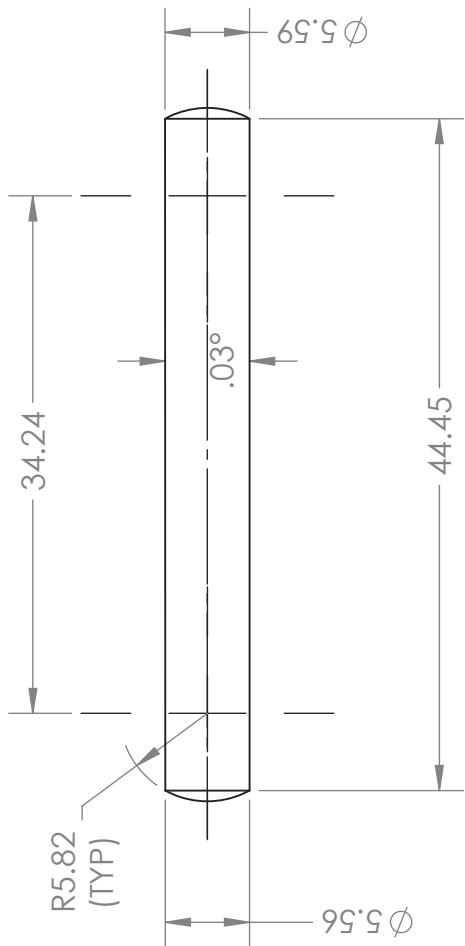
DESCRIPTION. Die Bush & Screw

SHEET 2 OF 7

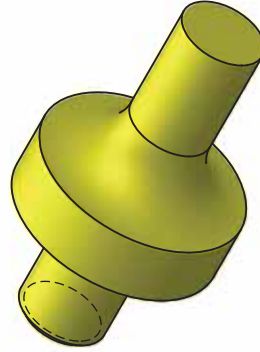
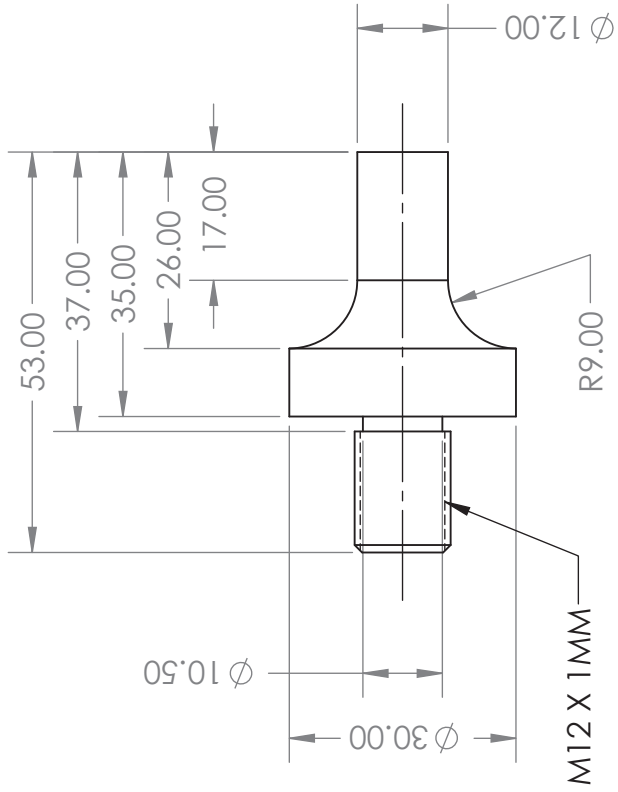
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Dowel & Punch

SHEET

3 OF 7

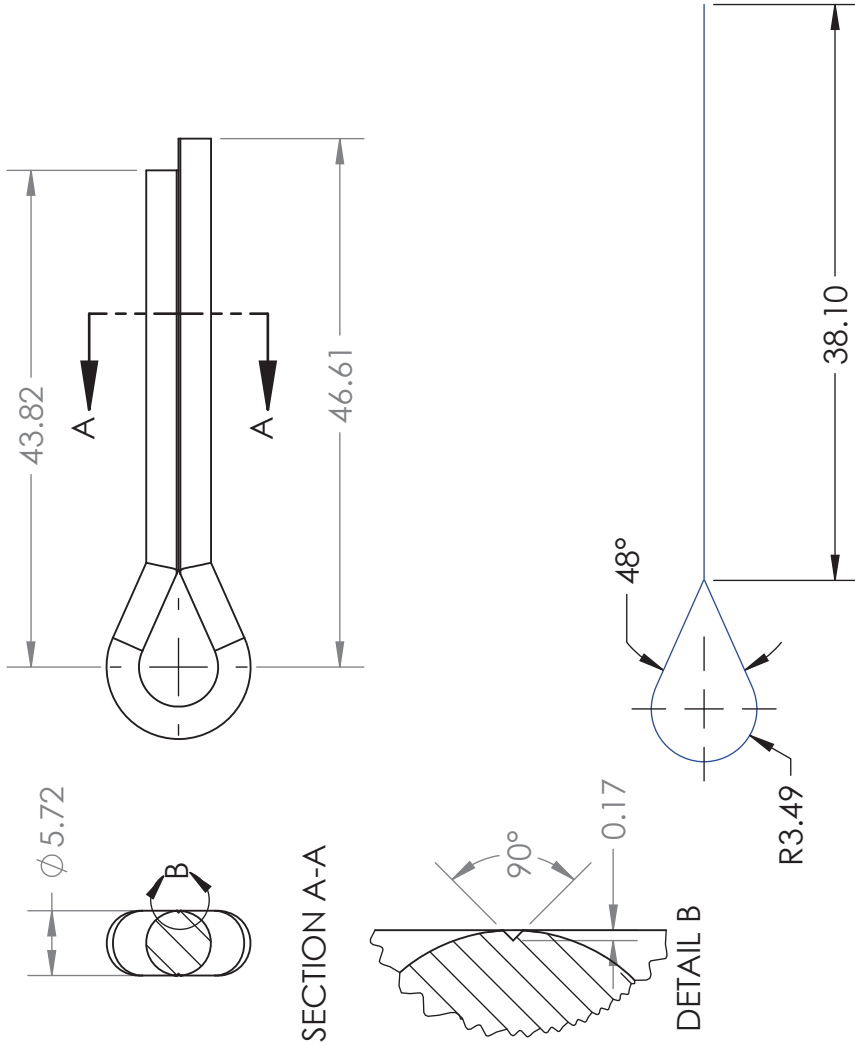
ANGLE OF PROJECTION



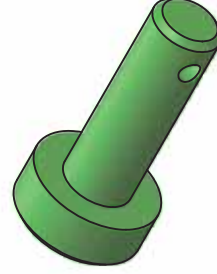
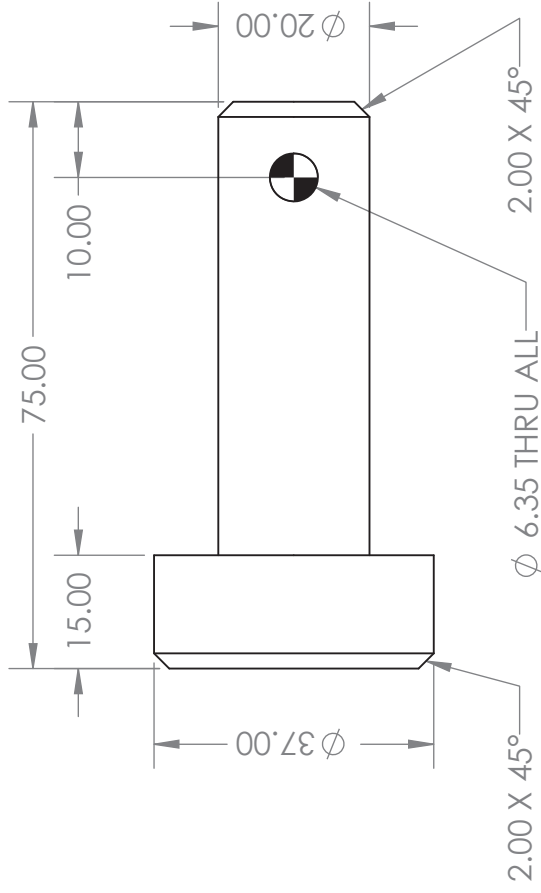
ALL DIMENSIONS ARE IN MM



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Lock Pin & Clip

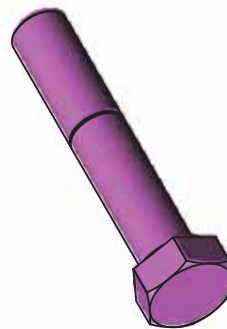
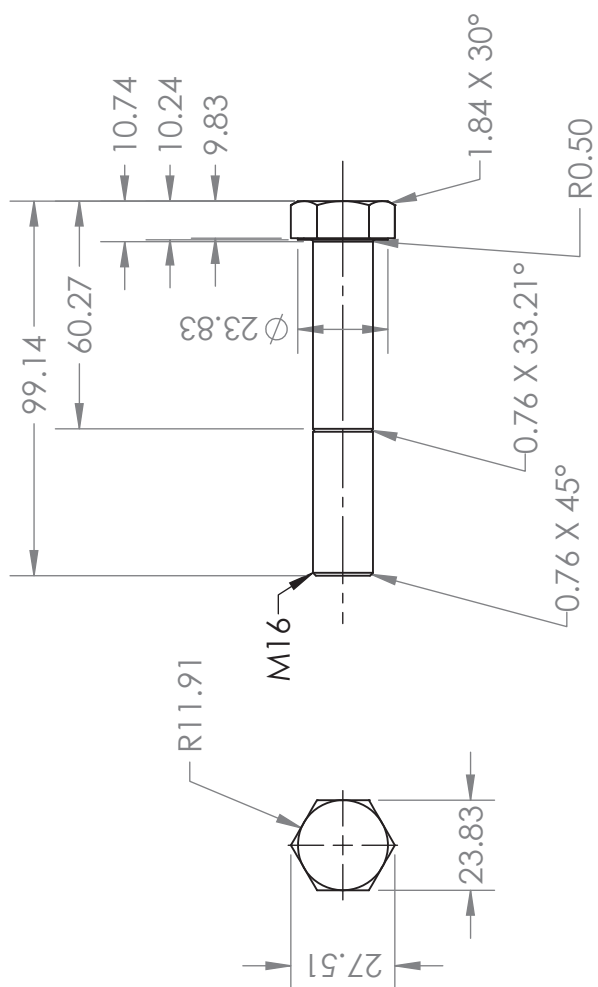
SHEET

5 OF 7

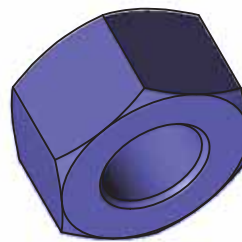
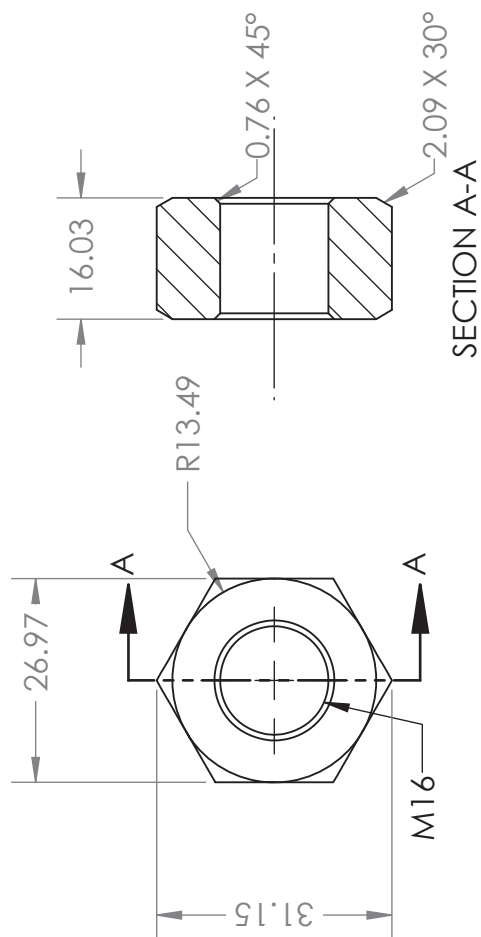
ANGLE OF PROJECTION



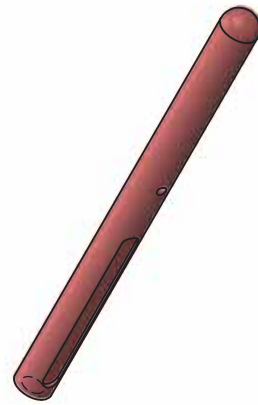
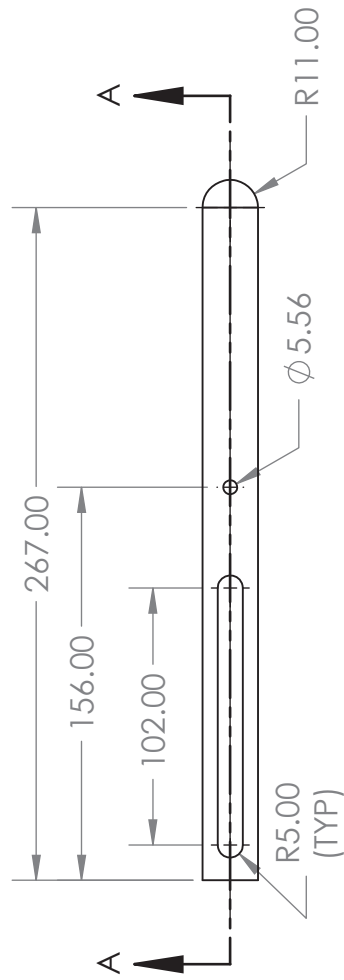
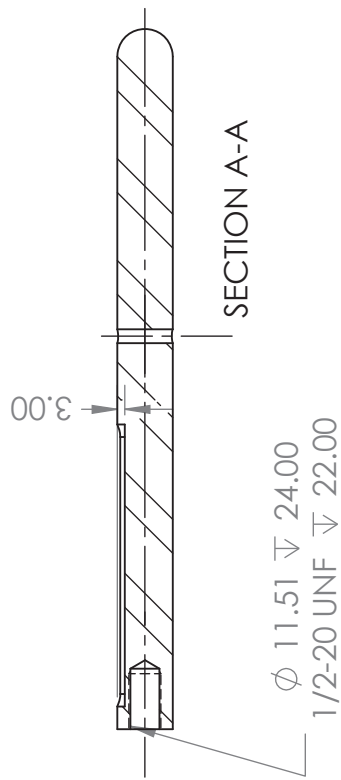
ALL DIMENSIONS ARE IN MM



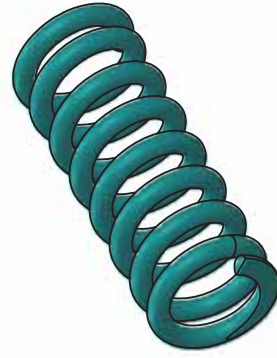
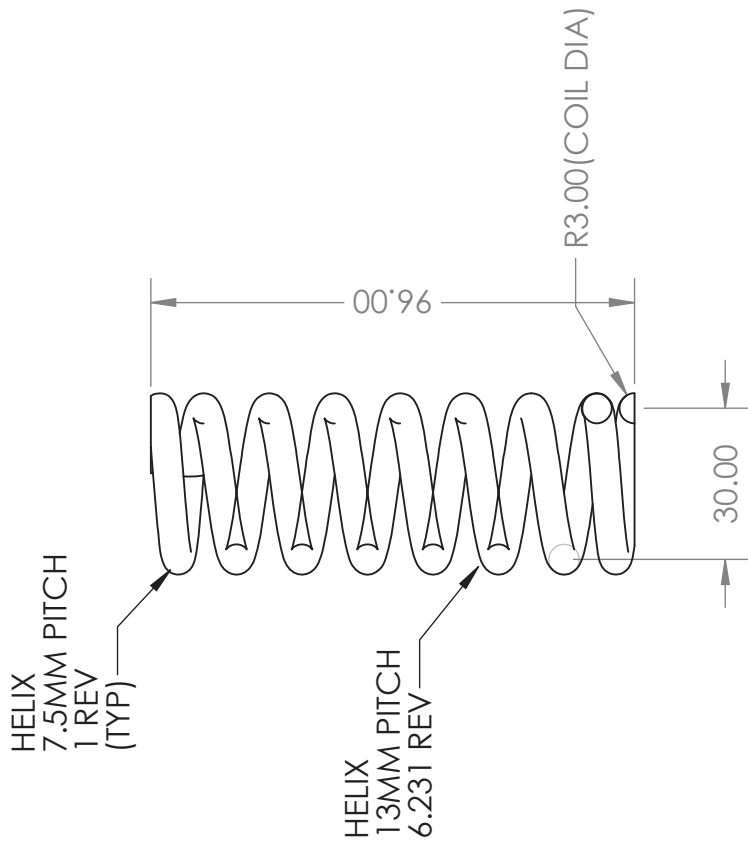
ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Transfer Pin and Spring

SHEET

7 OF 7

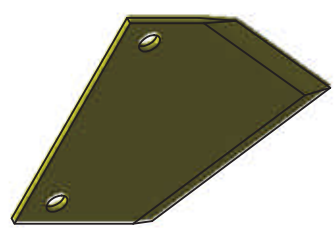
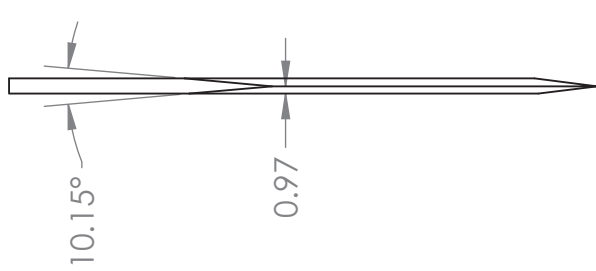
ANGLE OF PROJECTION



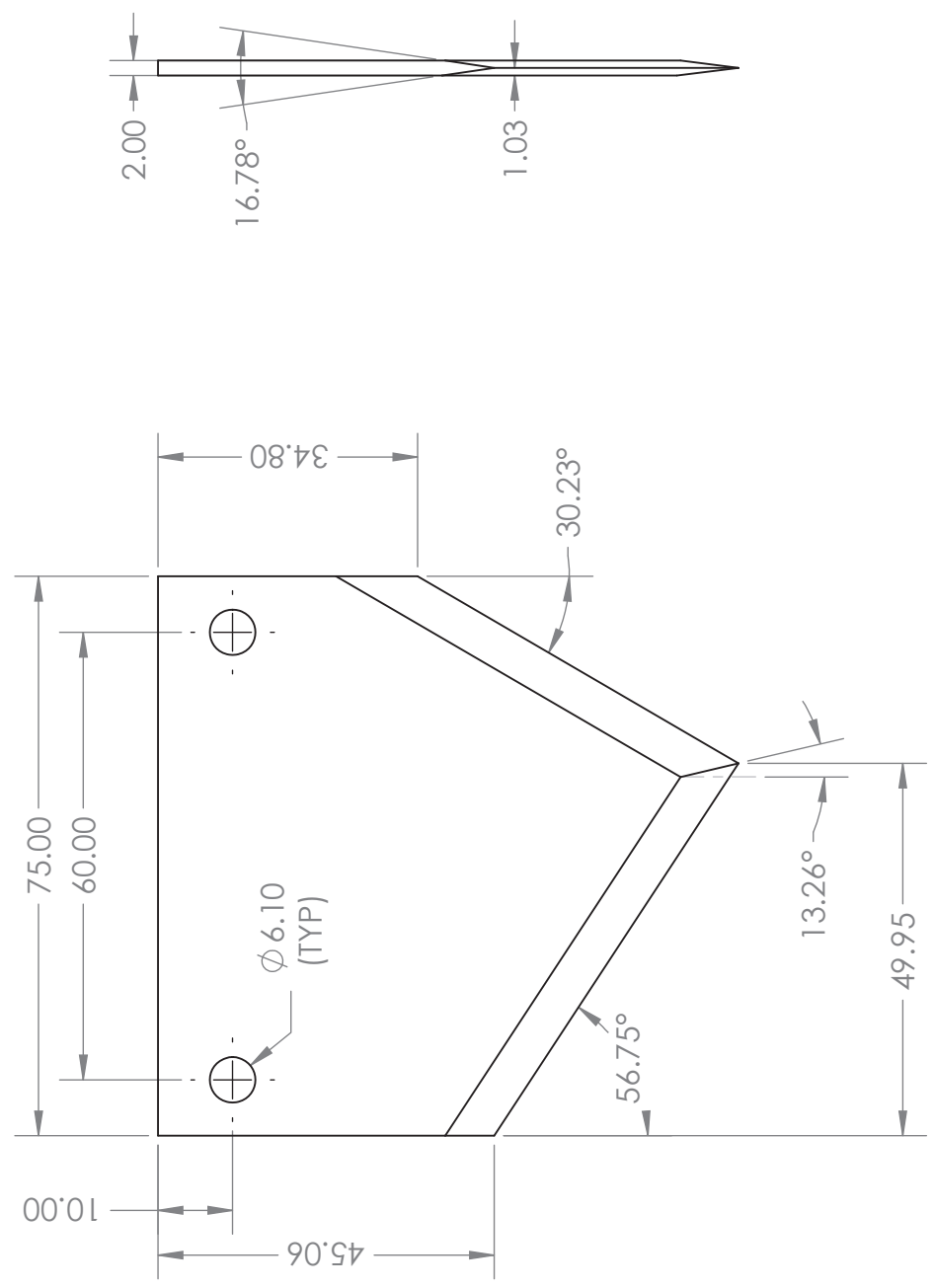
ALL DIMENSIONS ARE IN MM

GUILLOTINE FOR HOSE





ISOMETRIC VIEW



DESCRIPTION. Cutting Blade

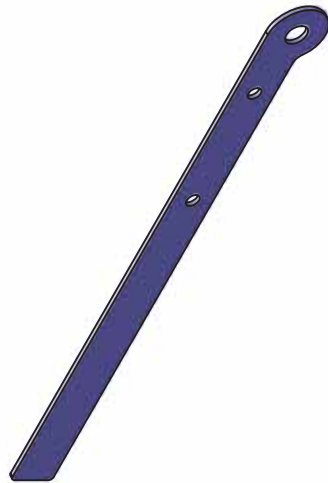
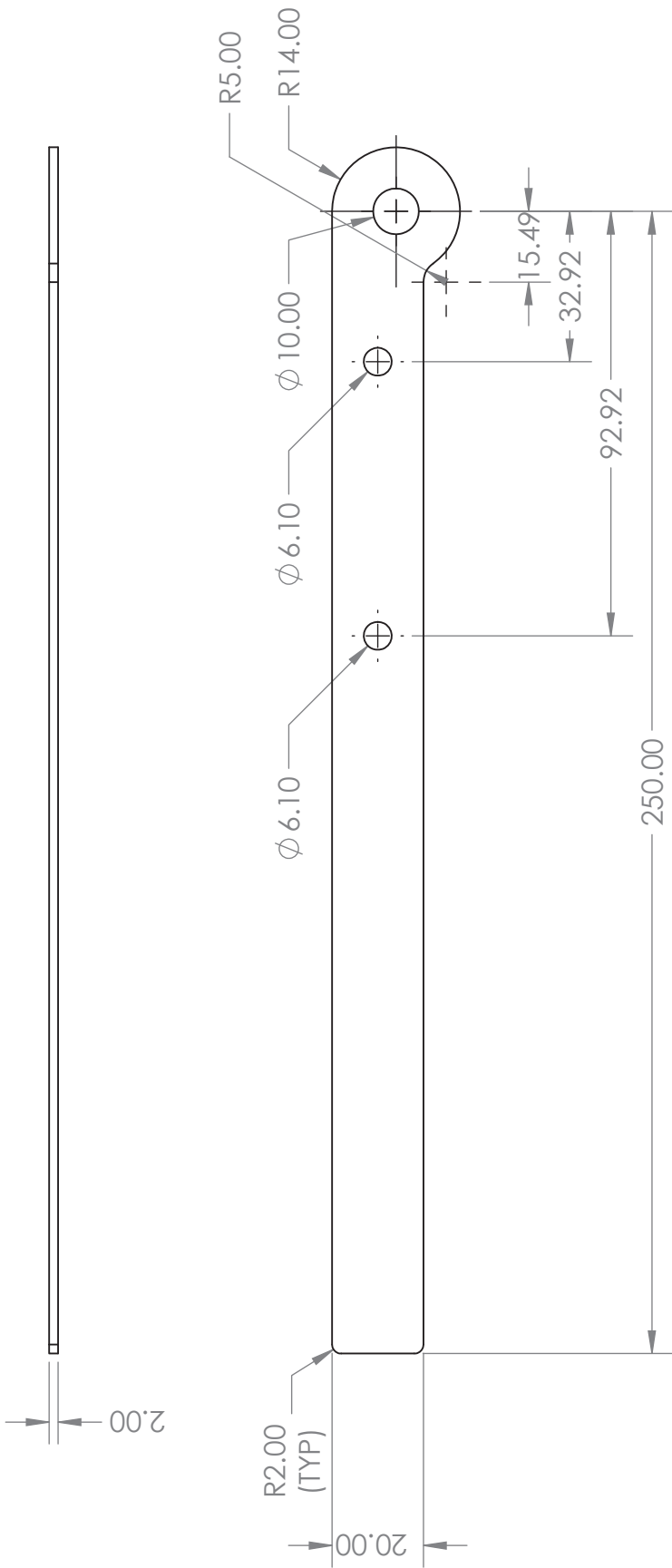
SHEET

1 OF 5

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Handle

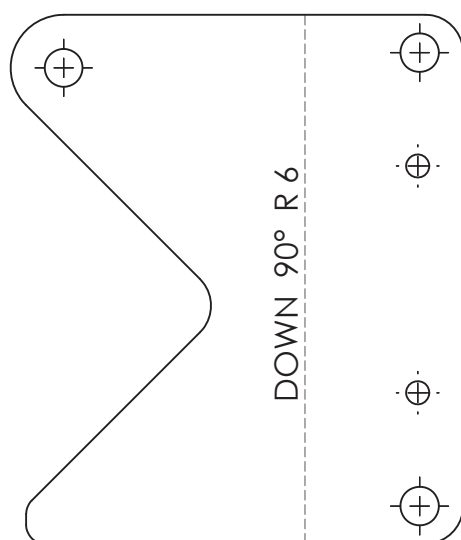
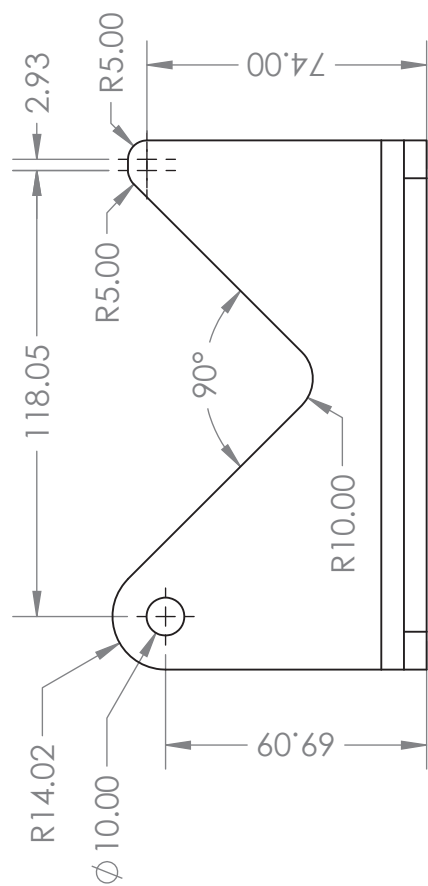
SHEET

2 OF 5

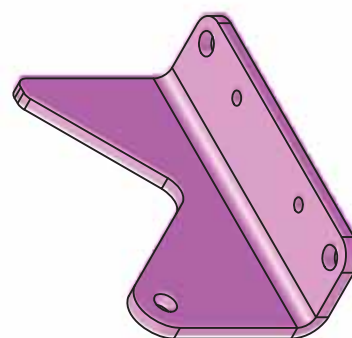
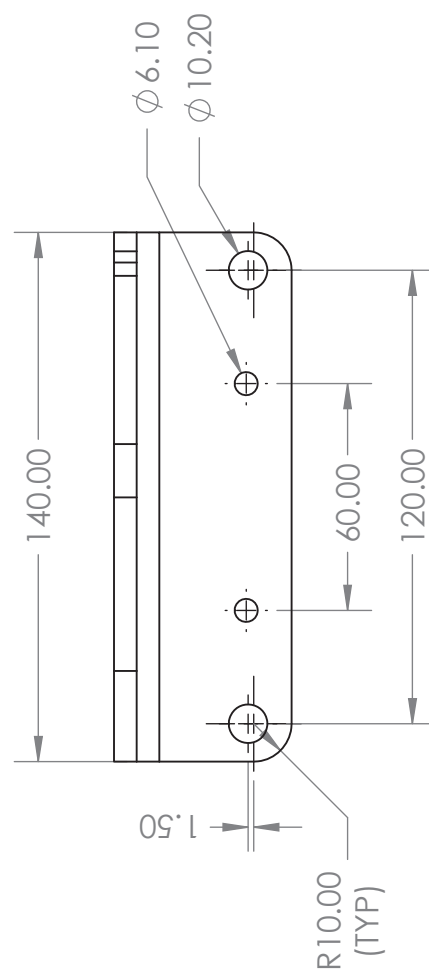
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

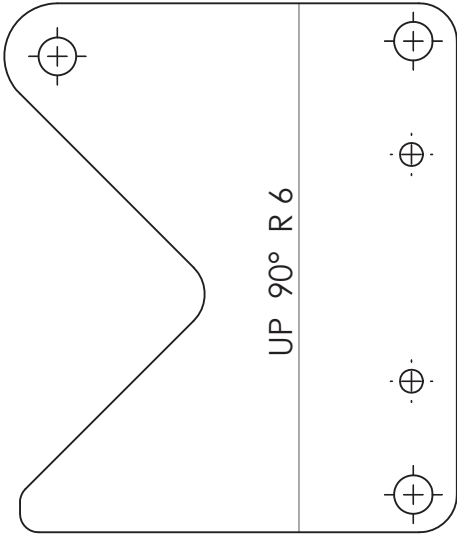
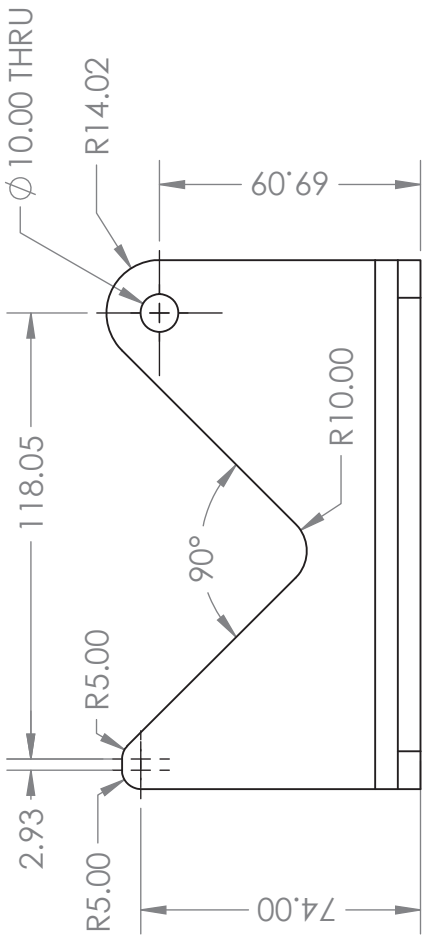
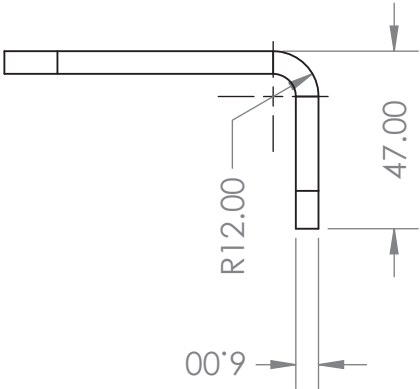


FLAT PATTERN VIEW

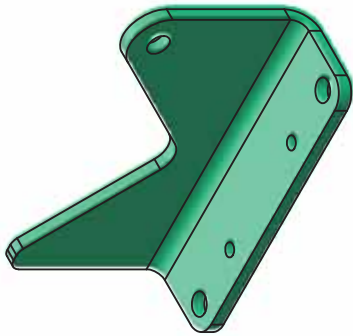


ISOMETRIC VIEW

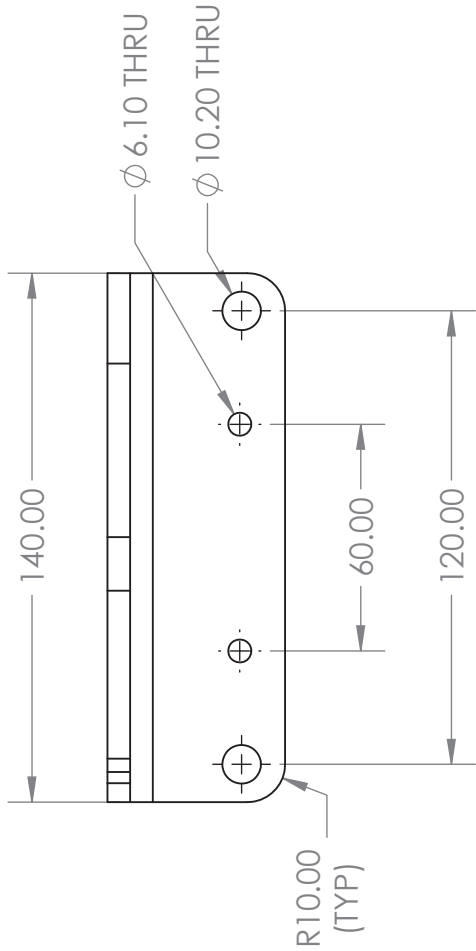
DESCRIPTION.	LH Die	SHEET	3 OF 5	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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FLAT PATTERN VIEW



ISOMETRIC VIEW



DESCRIPTION.

RH Die

SHEET

4 OF 5

ANGLE OF PROJECTION

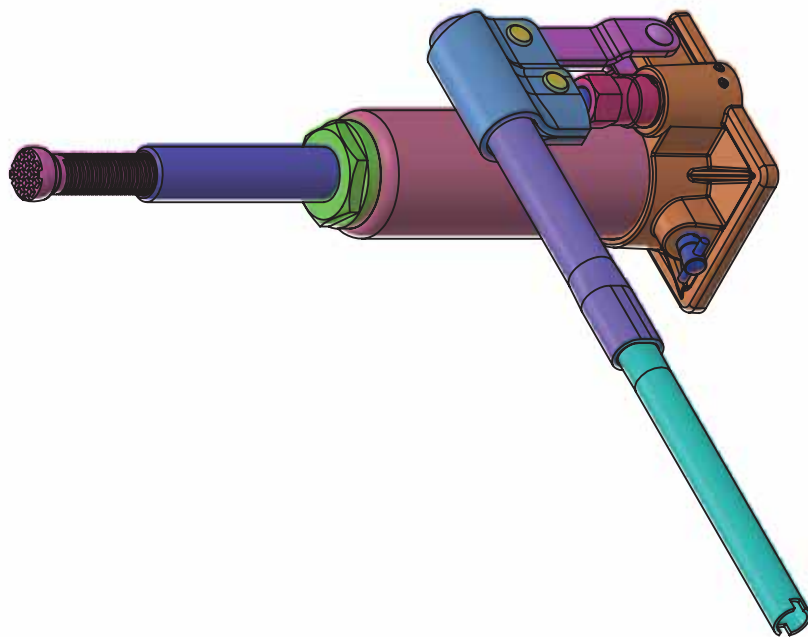


ALL DIMENSIONS ARE IN MM

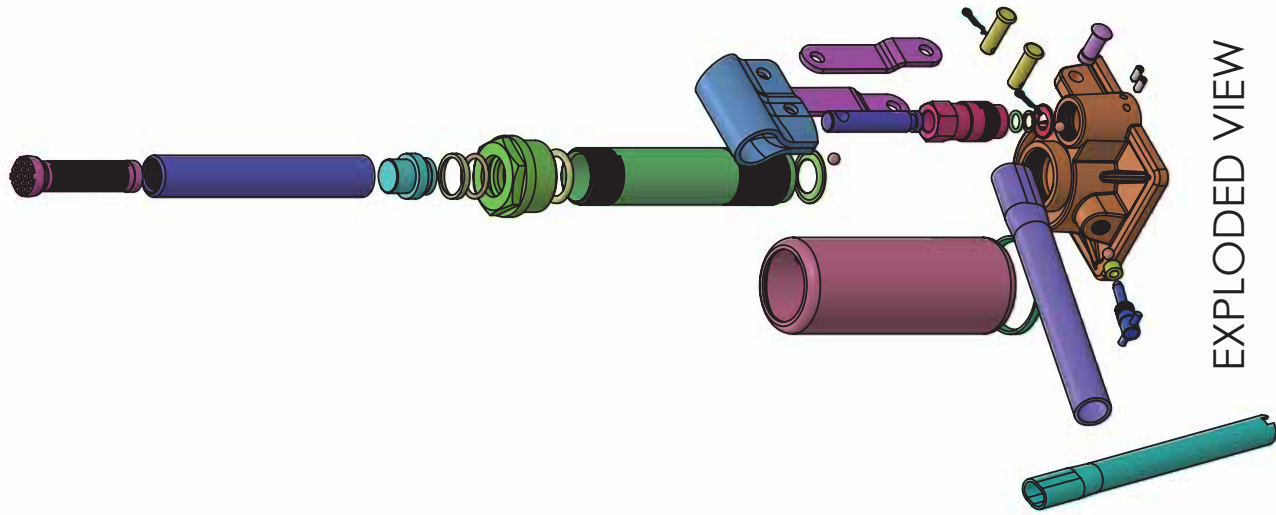
ISOMETRIC VIEW	DESCRIPTION. STANDARDS
ISOMETRIC VIEW	SHEET 5 OF 5 ANGLE OF PROJECTION
ISOMETRIC VIEW	ALL DIMENSIONS ARE IN MM

HYDRAULIC BOTTLE JACK





ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION: Hydraulic Bottle Jack -
Exploded View

SHEET 1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION.Plunger Assy - Exploded

SHEET 1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

ISOMETRIC VIEW	ISOMETRIC VIEW	ISOMETRIC VIEW	DESCRIPTION. Back Up Ring & O-Ring (Plunger) & Plunger	SHEET 1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



EXPLODED VIEW

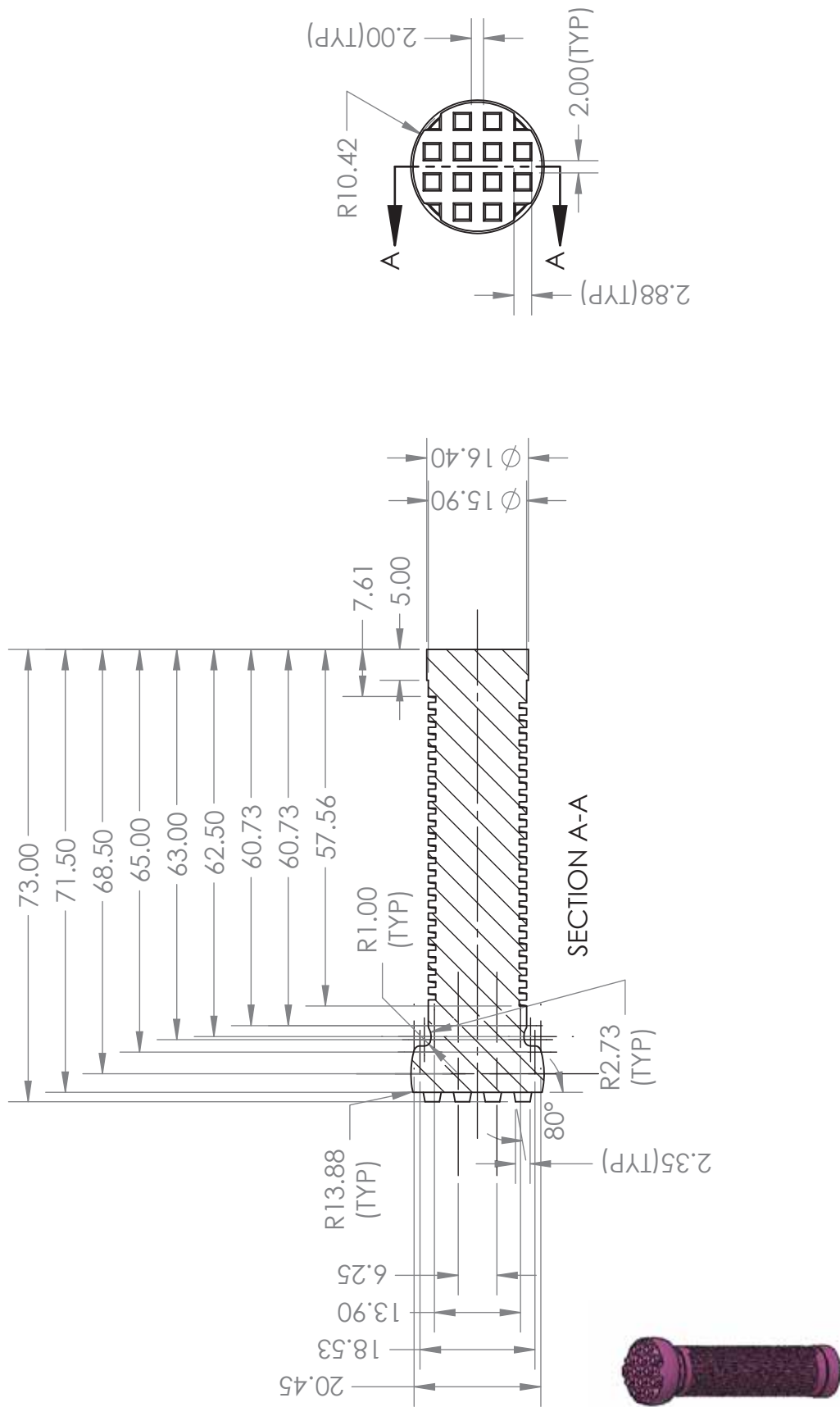
DESCRIPTION. Ram Assy - Exploded

SHEET 1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

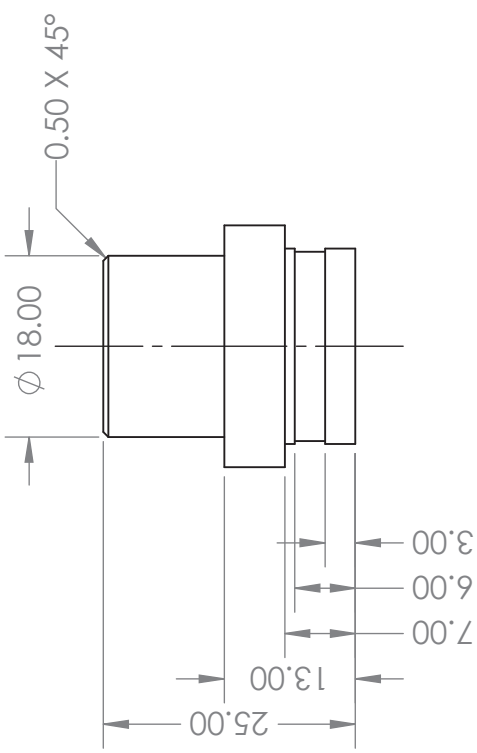
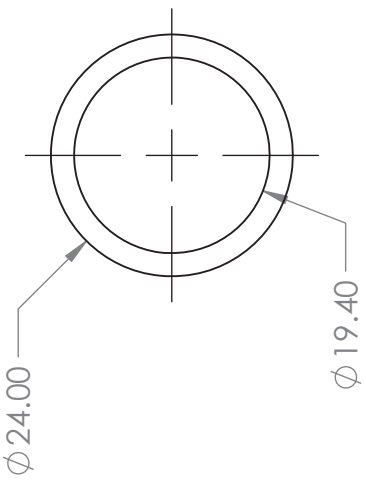
DESCRIPTION. Screw Post

SHEET 3 OF 3

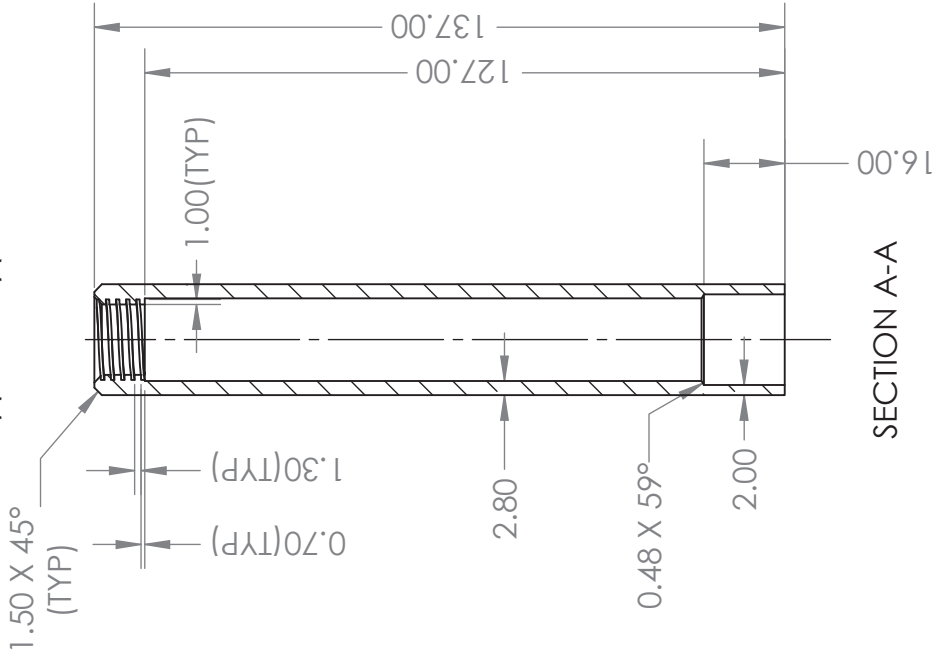
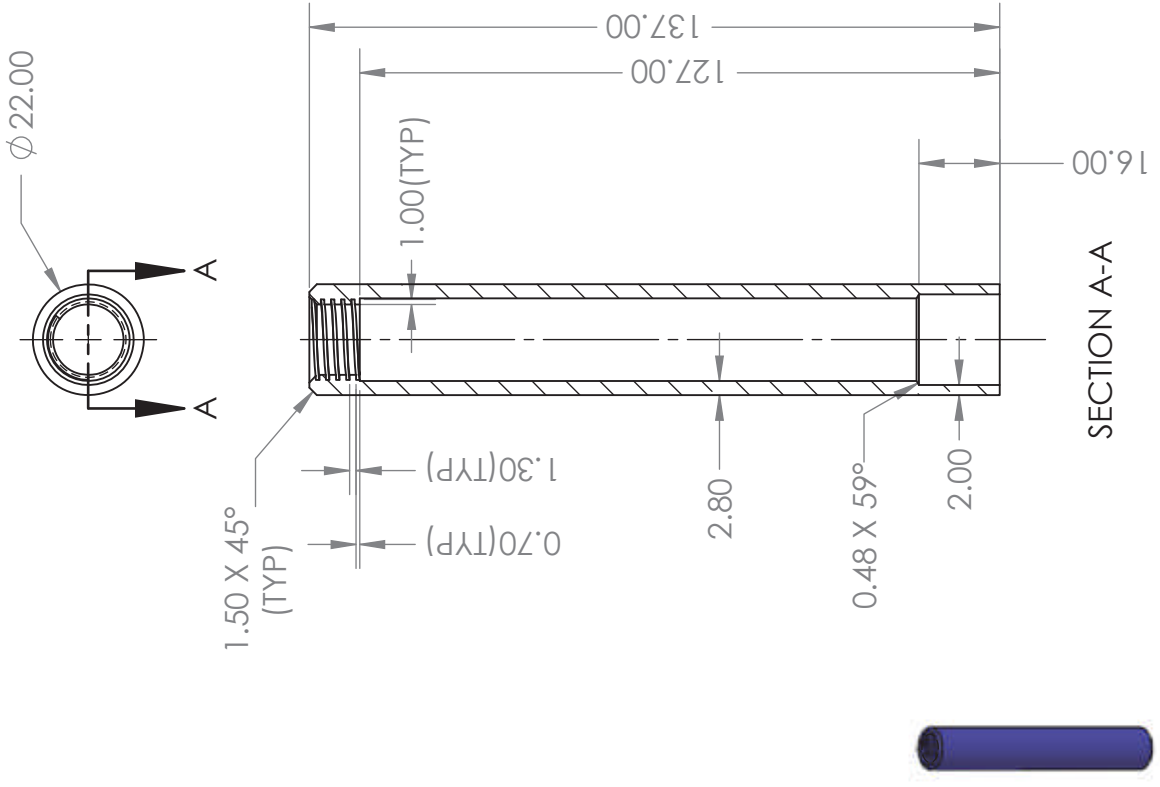
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

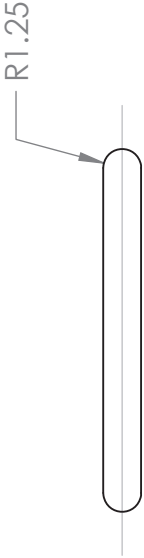
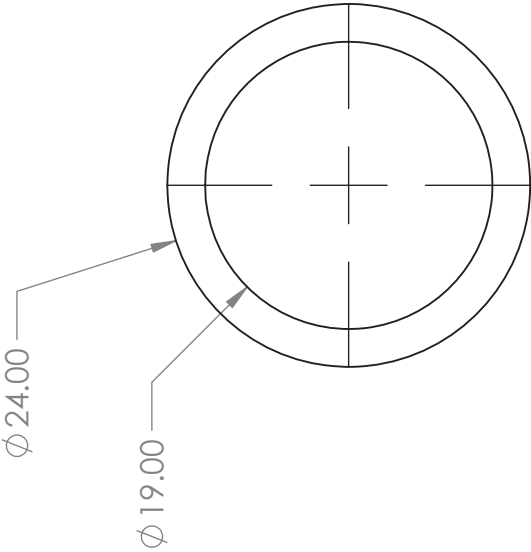
DESCRIPTION. Ram Cap & Ram

SHEET 2 OF 3

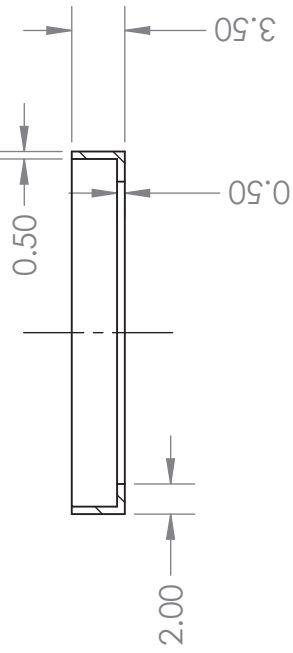
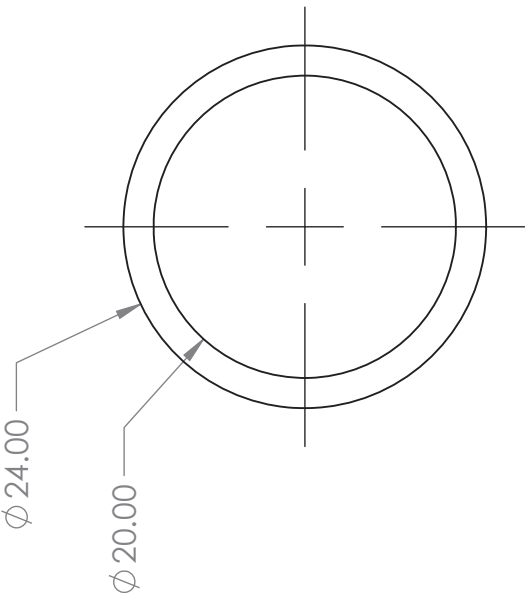
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

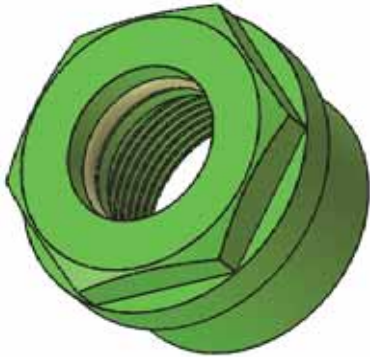
DESCRIPTION. O-Ring (Ram) & O-Ring Retainer

SHEET 1 OF 3

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



EXPLODED VIEW

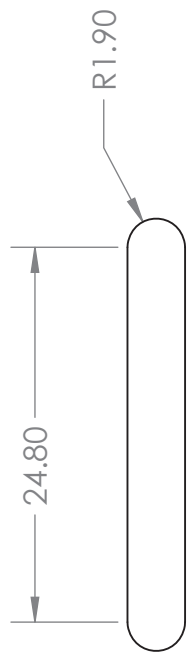
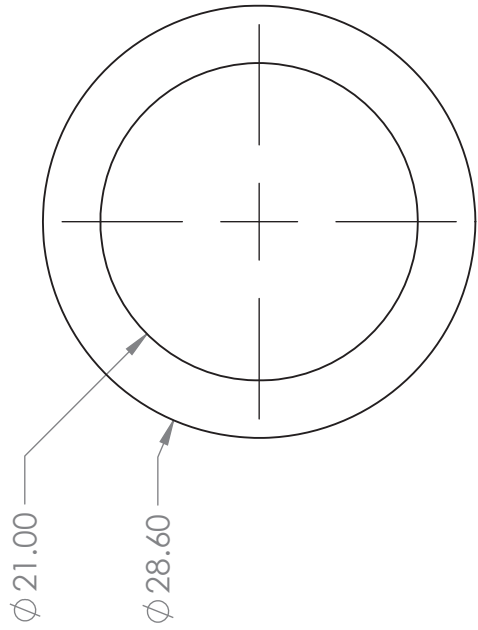
DESCRIPTION. Top Nut Assy- EXPLODED

SHEET 1 OF 1

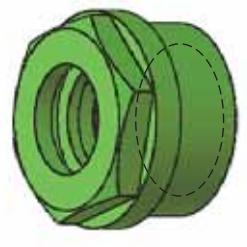
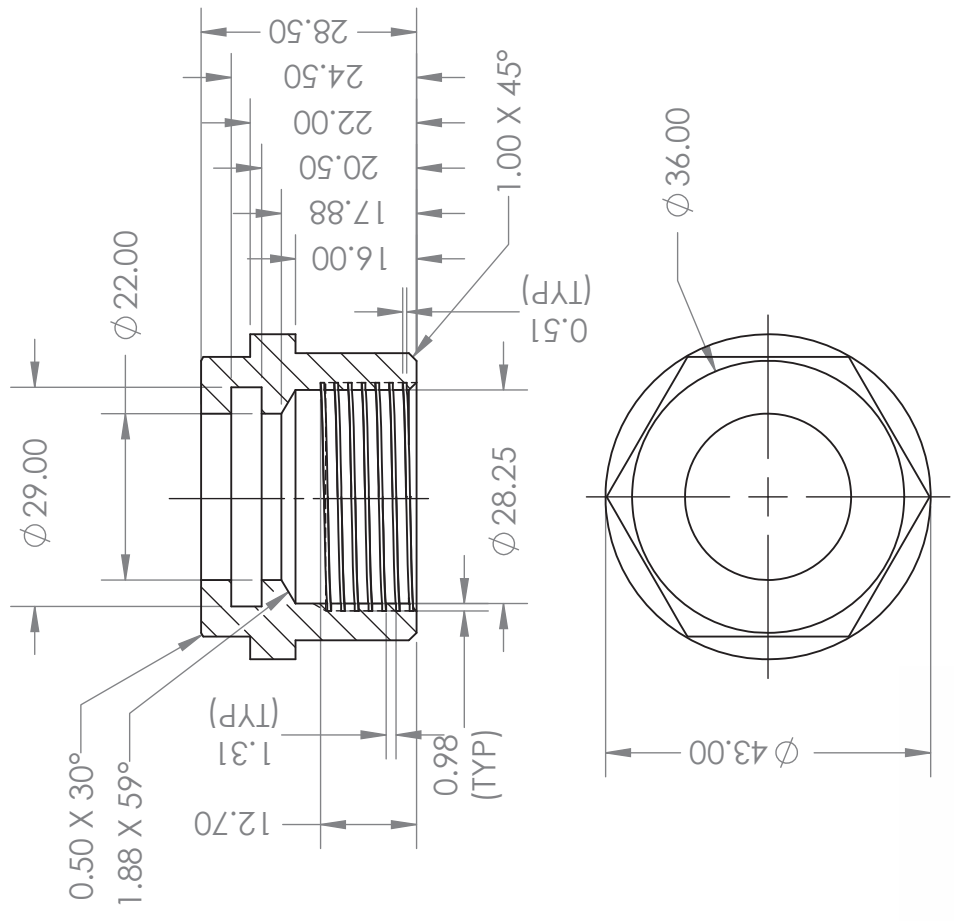
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

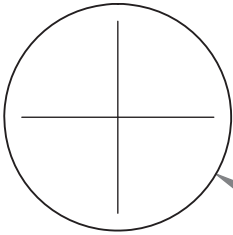
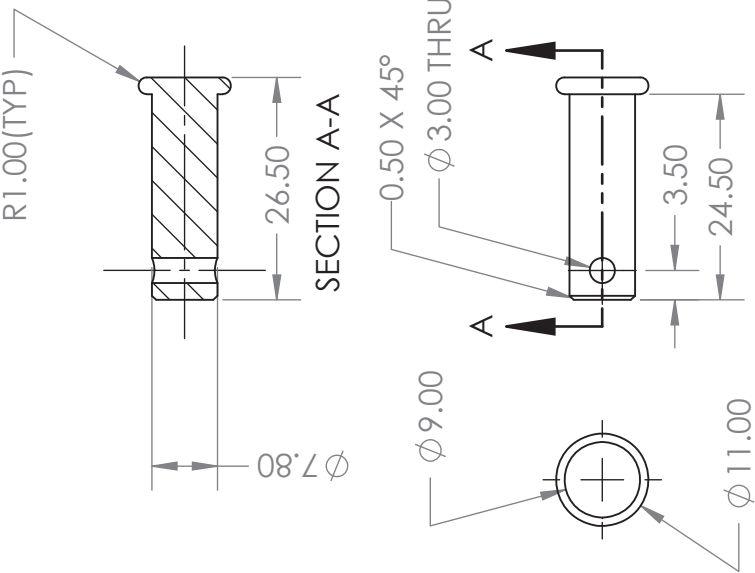
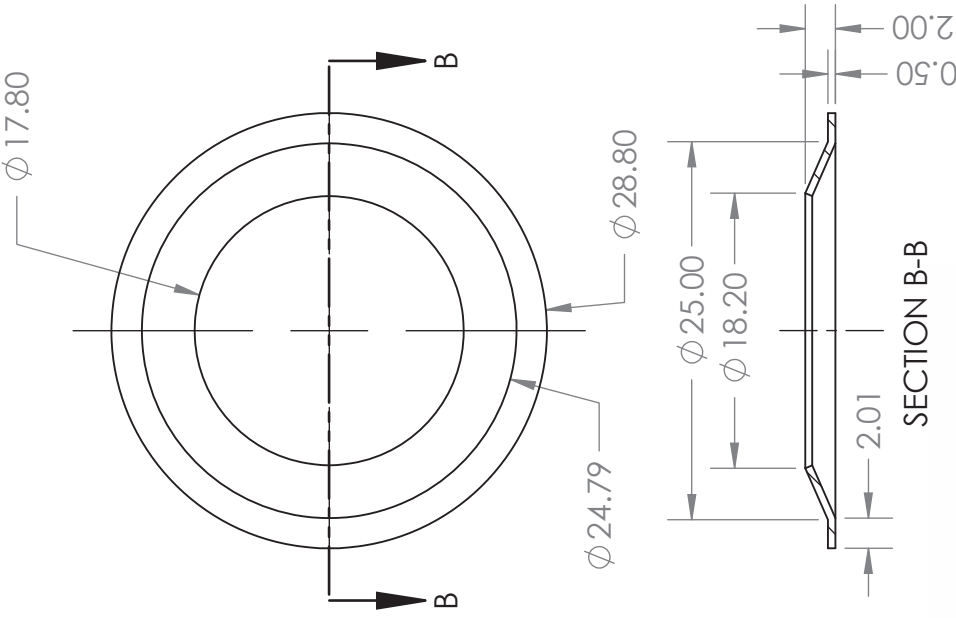
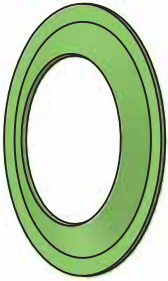
DESCRIPTION. O-Ring (Top Nut) & Top Nut

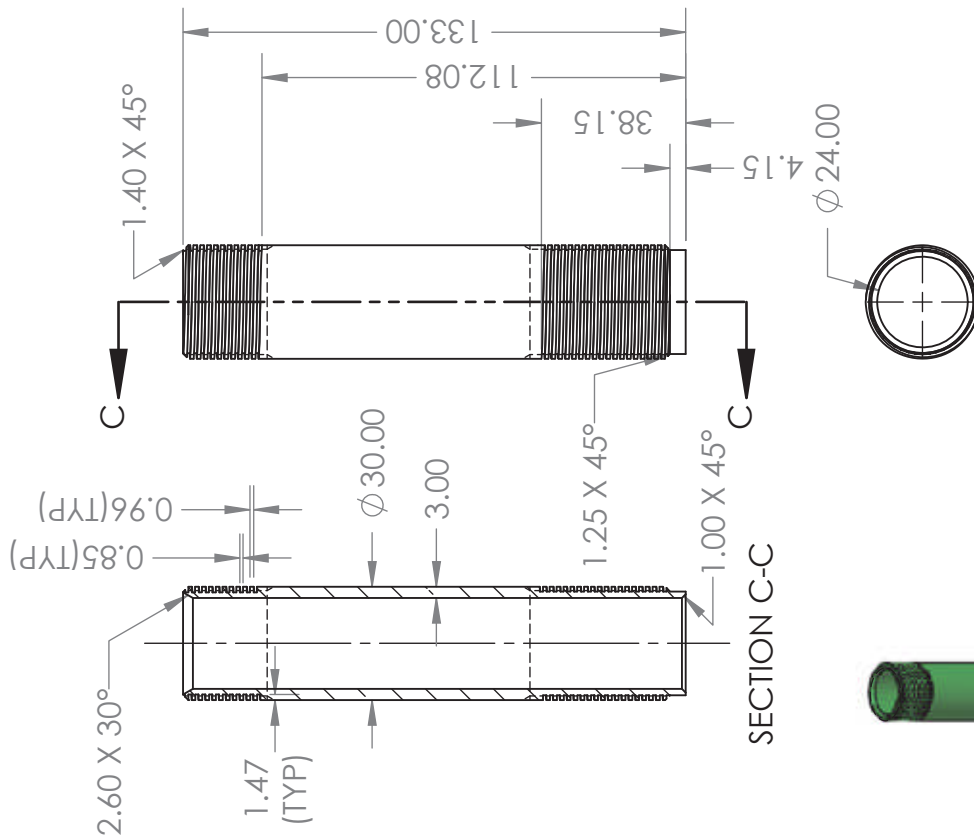
SHEET 1 OF 1

ANGLE OF PROJECTION

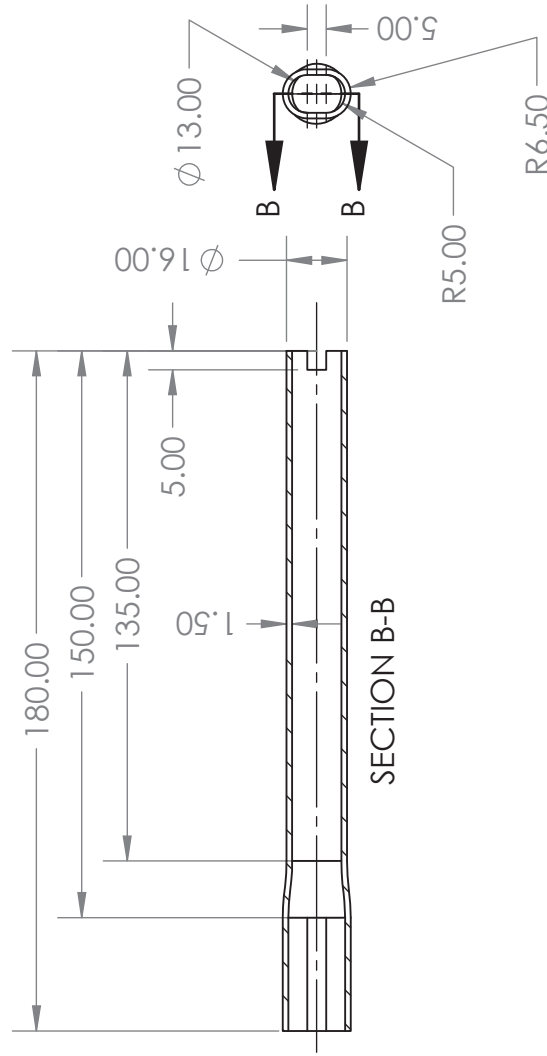


ALL DIMENSIONS ARE IN MM

 $\phi 6.00$  ISOMETRIC VIEW	  ISOMETRIC VIEW	  ISOMETRIC VIEW	DESCRIPTION. Ball 6 mm & Clevis Pin 8x24 ISO 2341 & Cylinder Ring	SHEET 1 OF 9	ANGLE OF PROJECTION	 ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

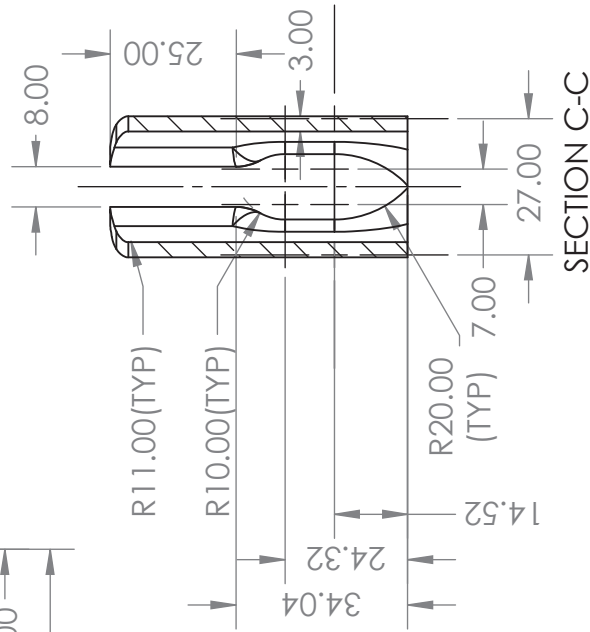
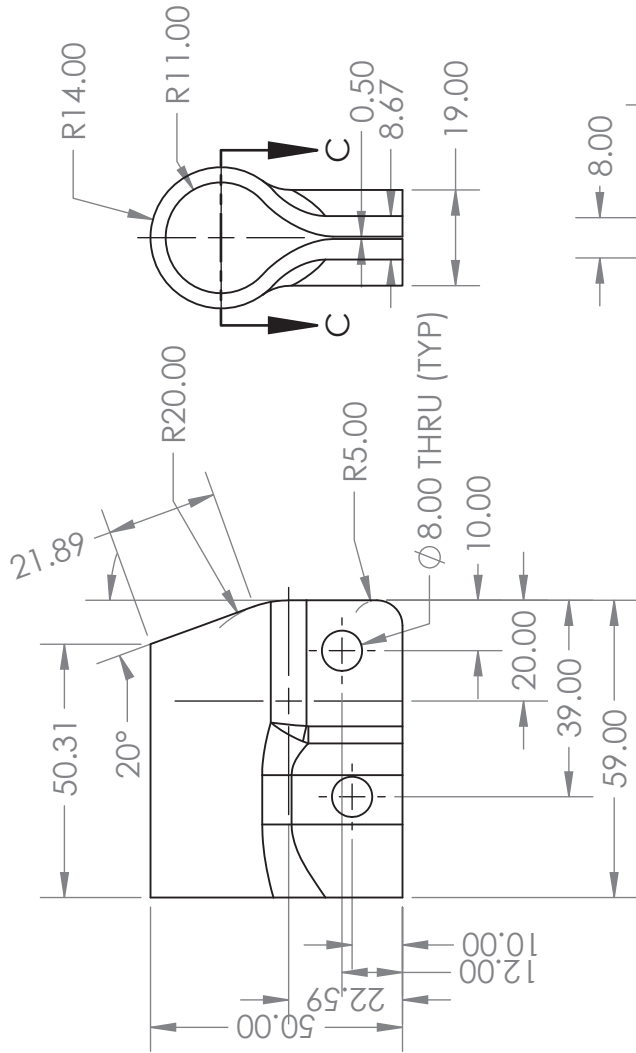
Cylinder & Handle Adapter

SHEET 2 OF 9

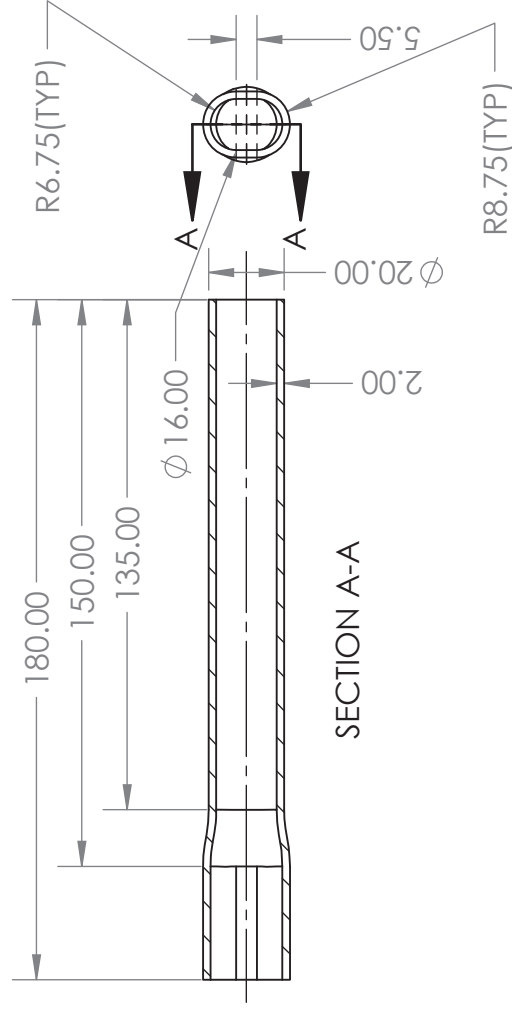
ANGLE OF PROJECTION



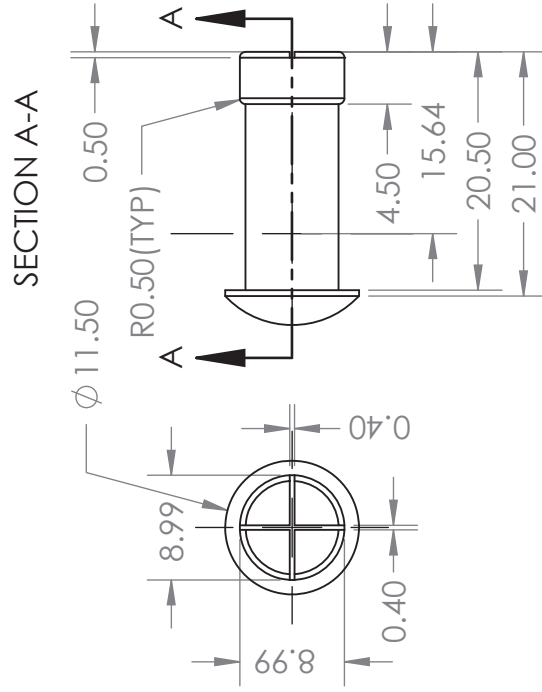
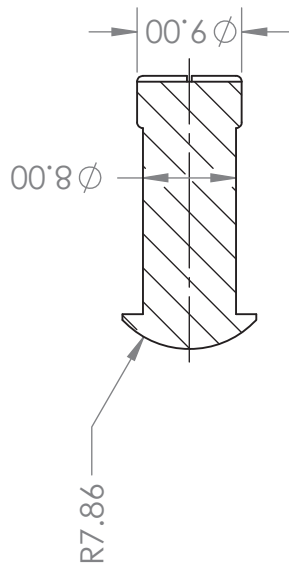
ALL DIMENSIONS ARE IN MM



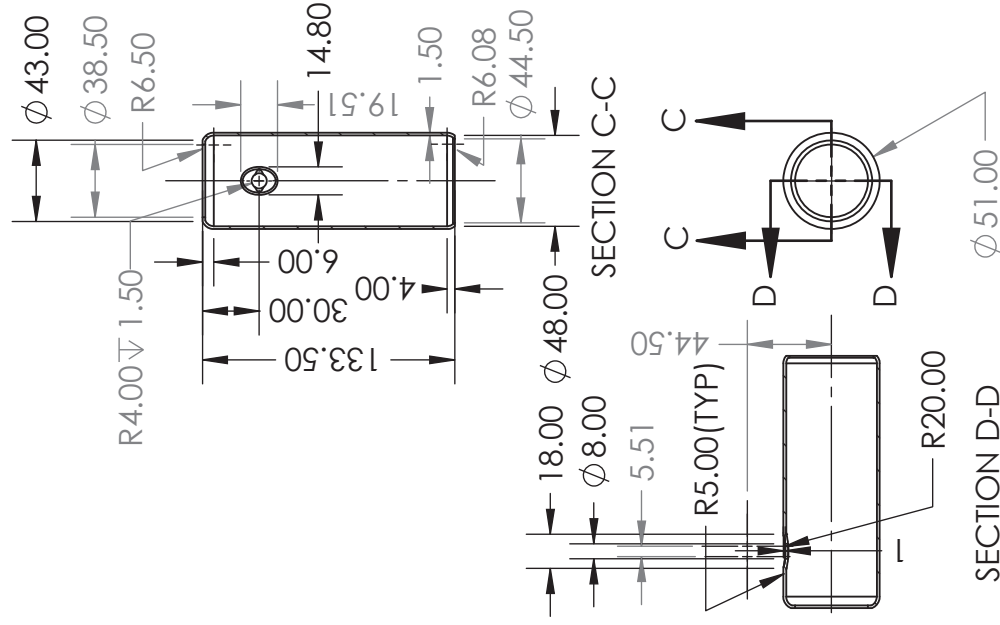
ISOMETRIC VIEW



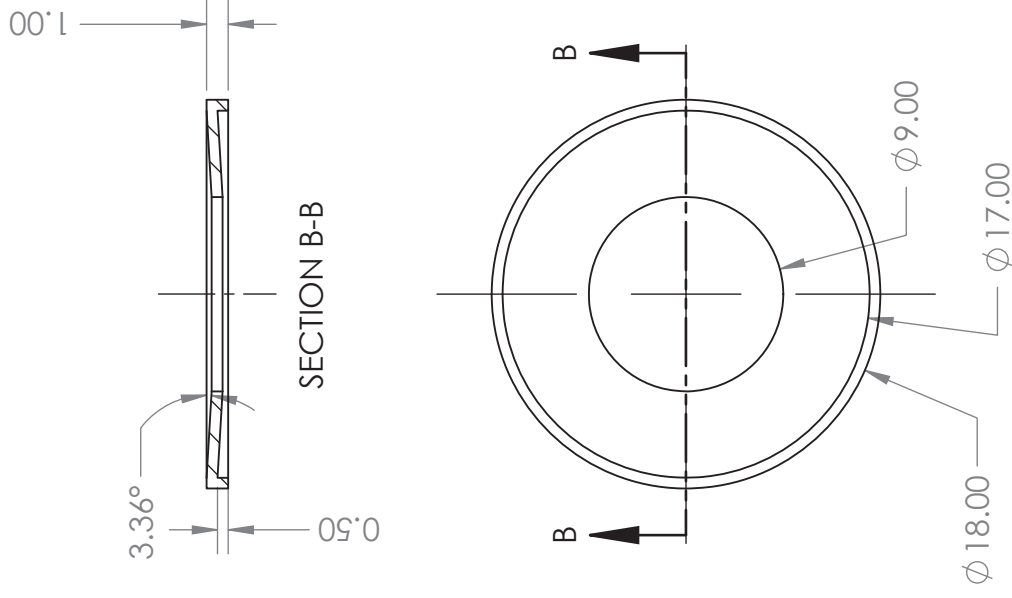
ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

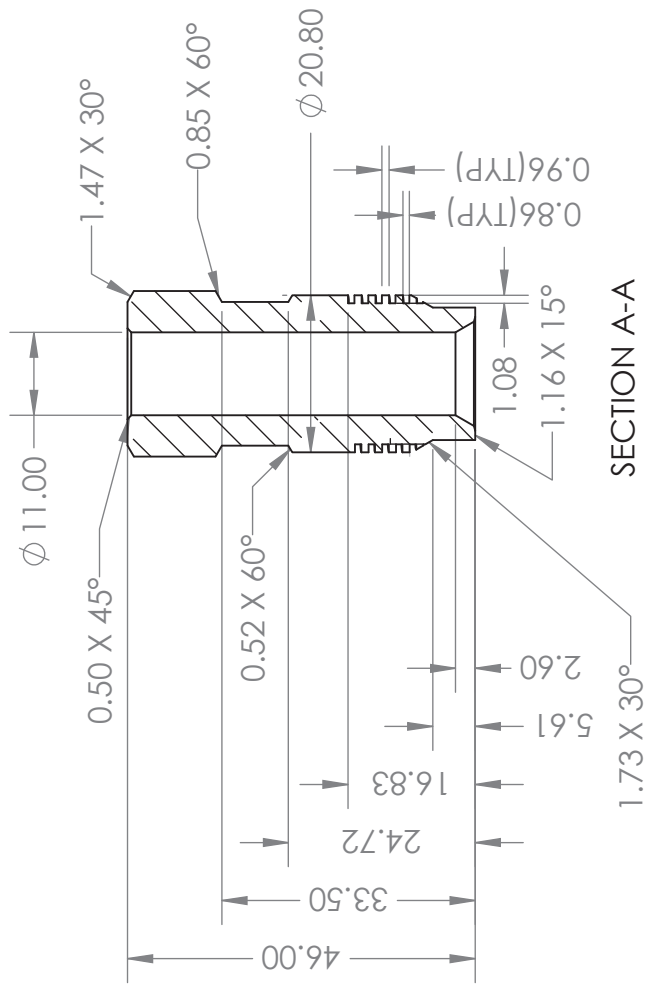
DESCRIPTION. Link Connector & Oil Tank & Pump Cylinder Ring

SHEET 4 OF 9

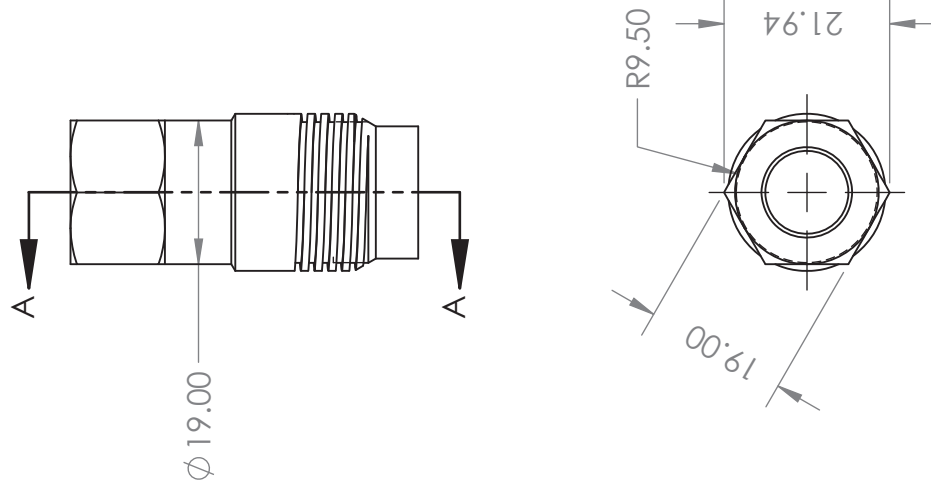
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

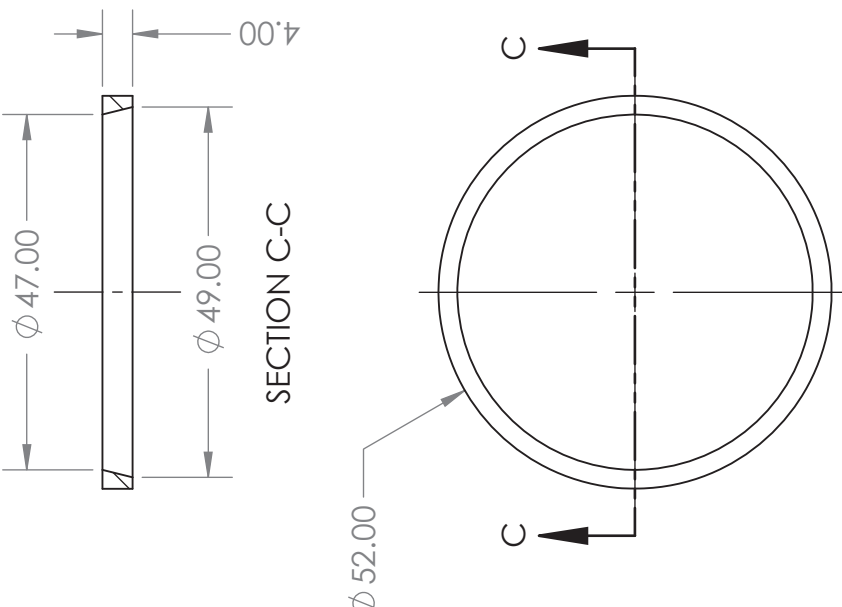
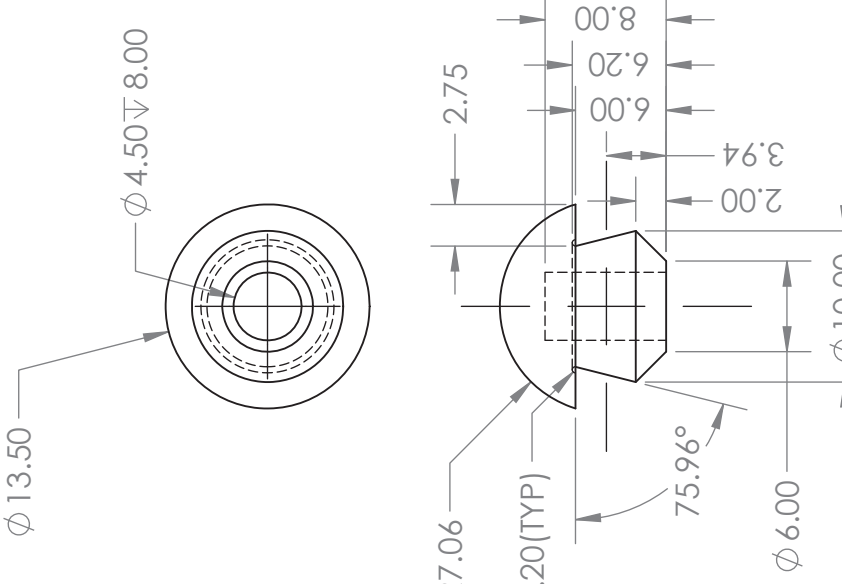
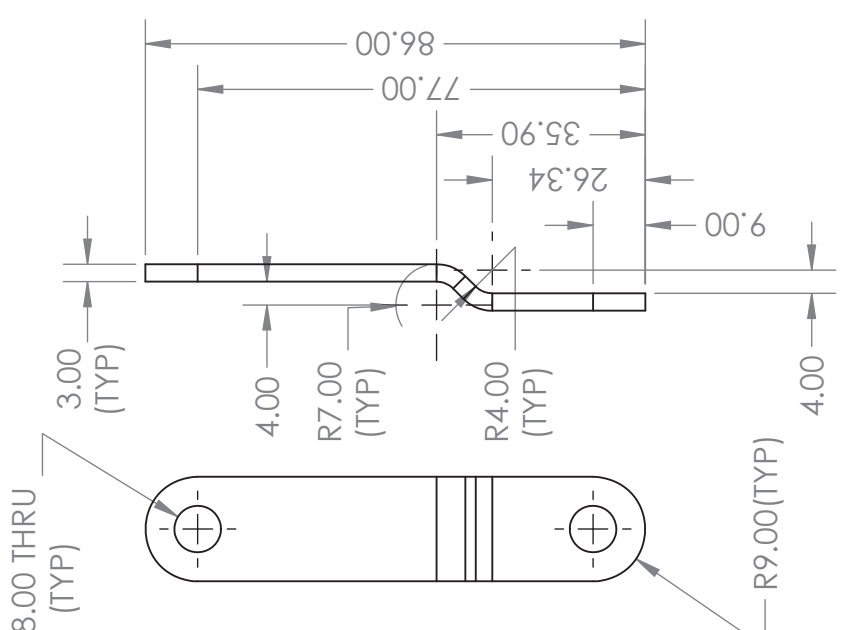


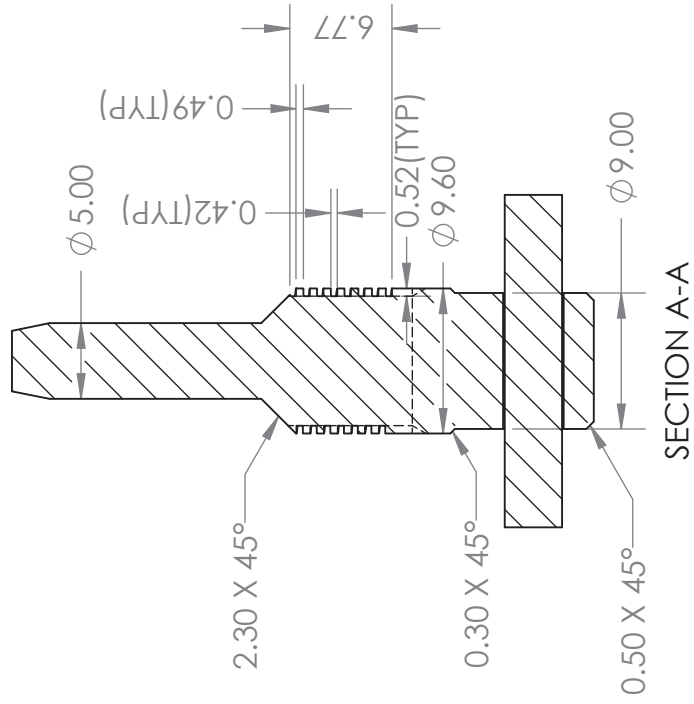
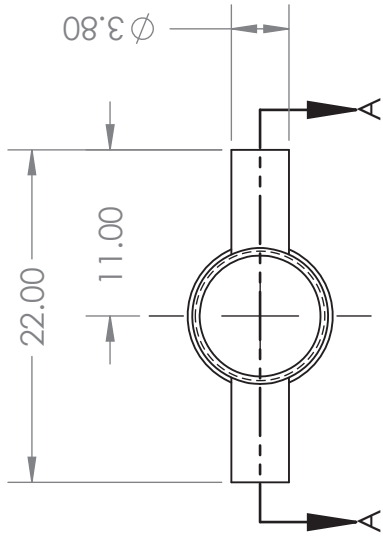
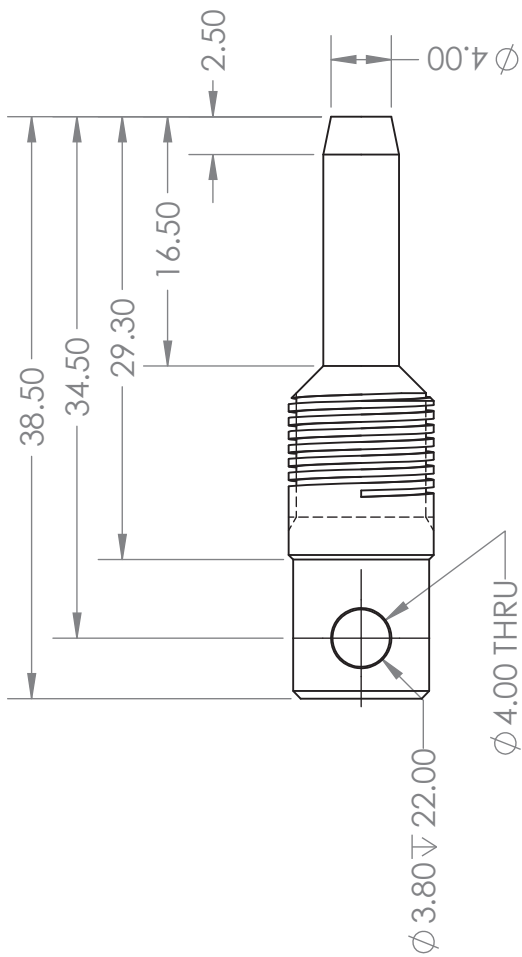
SECTION A-A



ISOMETRIC VIEW

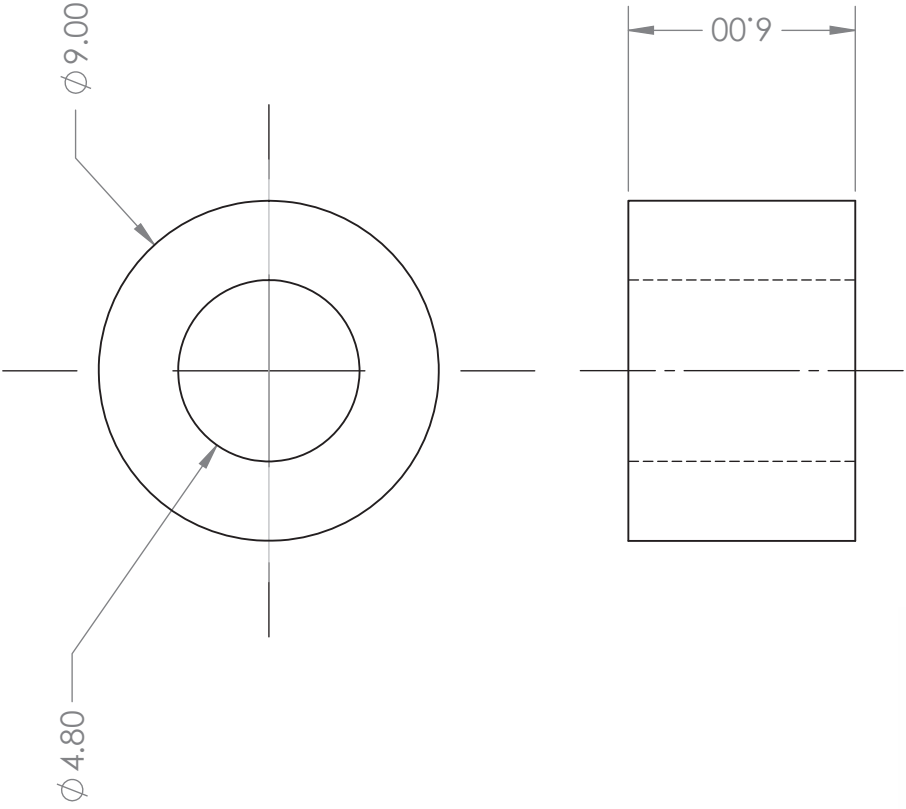


 SECTION C-C ISOMETRIC VIEW	 ISOMETRIC VIEW	 ISOMETRIC VIEW
ALL DIMENSIONS ARE IN MM	ANGLE OF PROJECTION	DESCRIPTION. Pump Link & Rubber Cap & Seal Ring (Oil Tank)

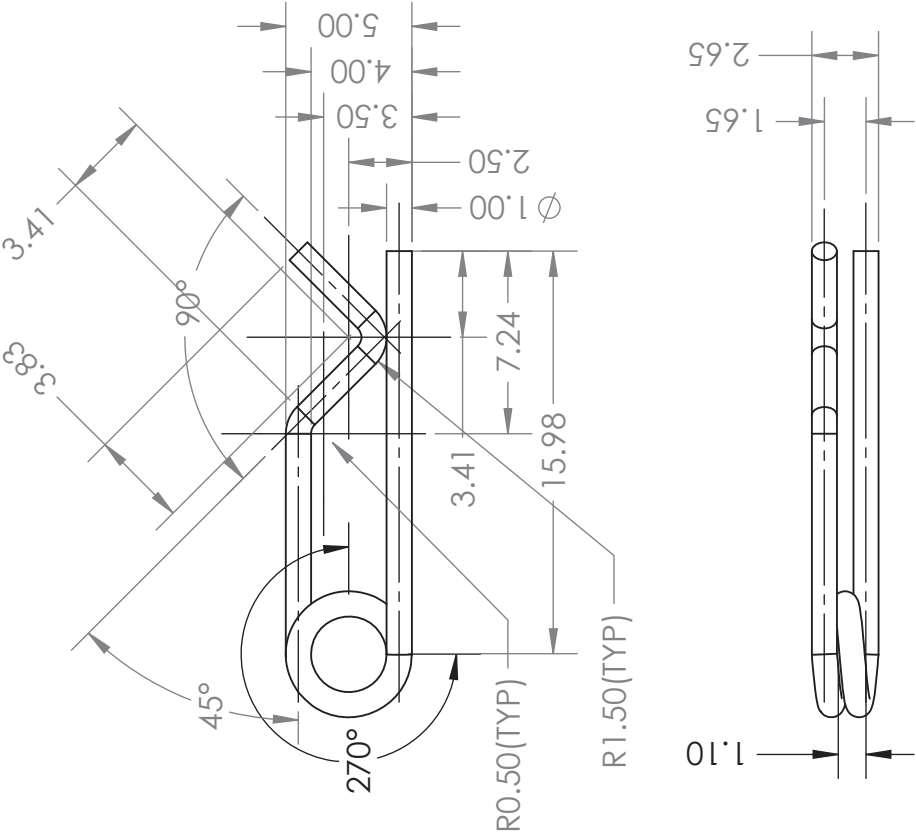


ISOMETRIC VIEW

DESCRIPTION.	Release Spindle	SHEET 7 OF 9	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



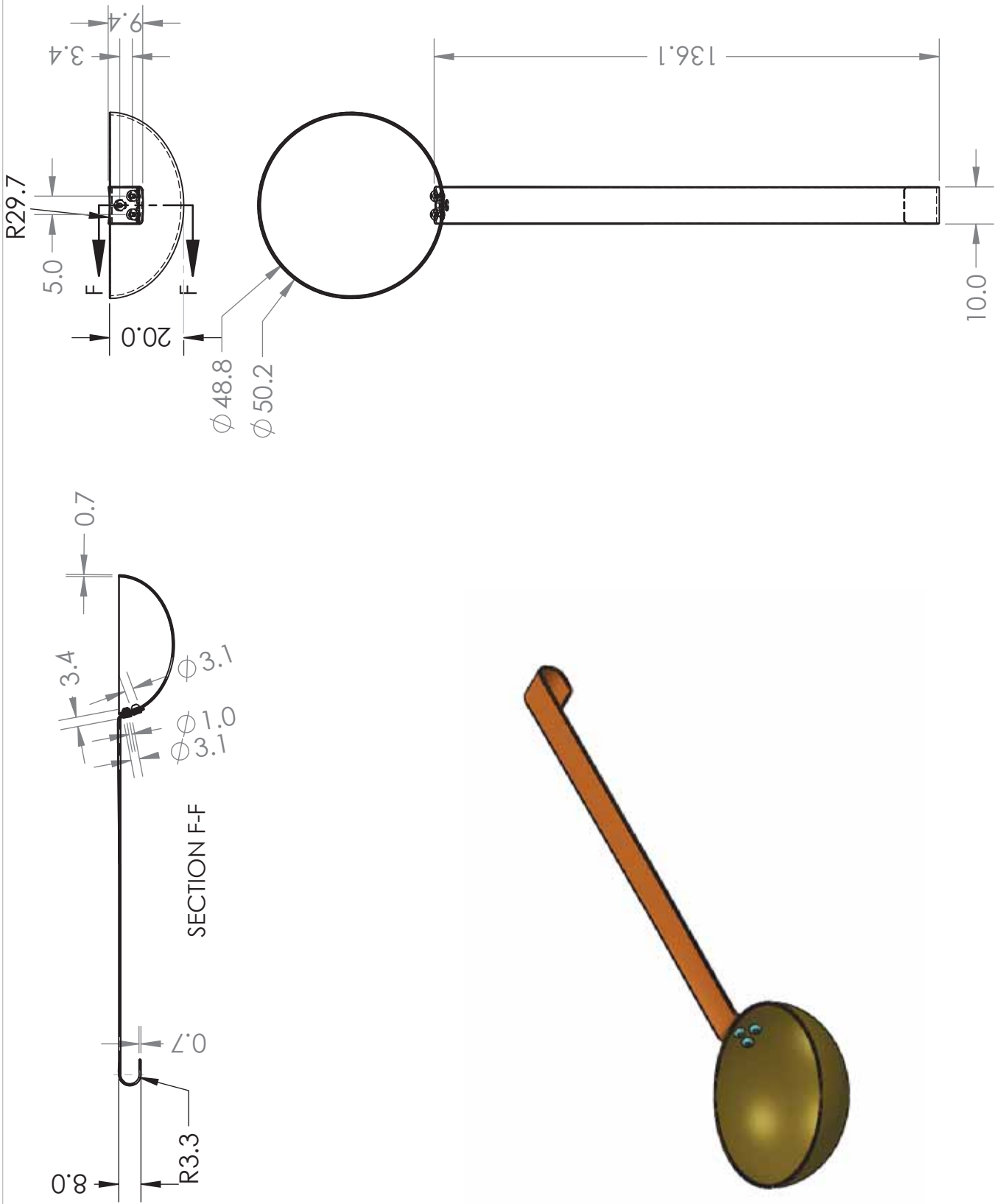
ISOMETRIC VIEW

DESCRIPTION: Seal Ring (Release Spindle) & Spring Connector



LADDLE

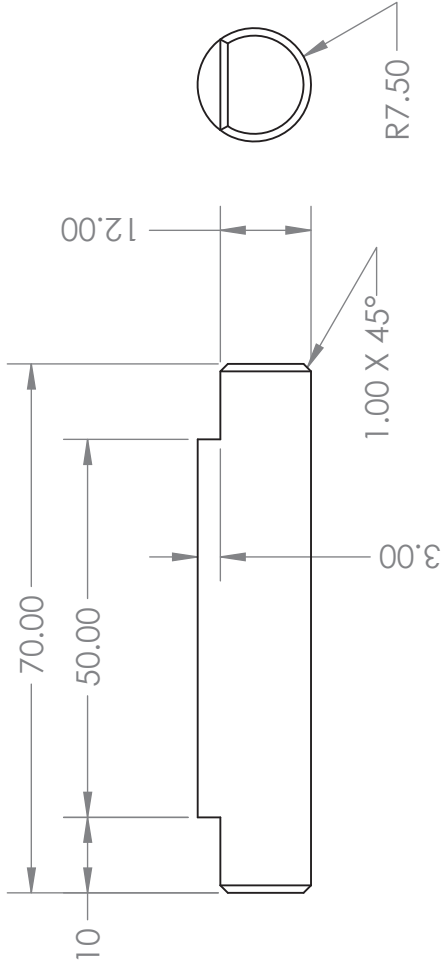




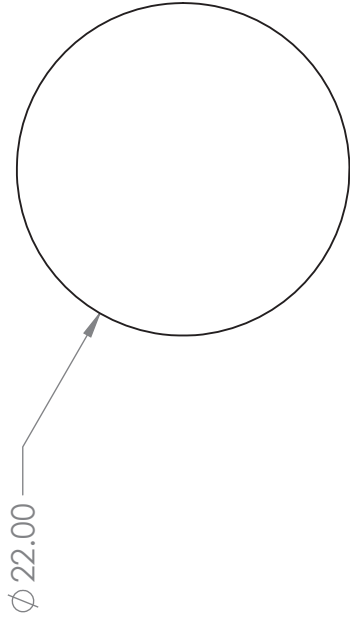
DESCRIPTION : LADLE	SHEET	1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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MILLING MACHINE VICE





ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Dowel & Ball

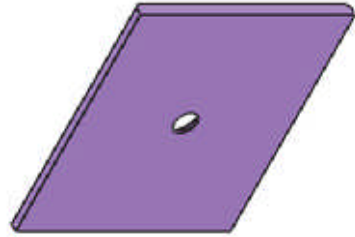
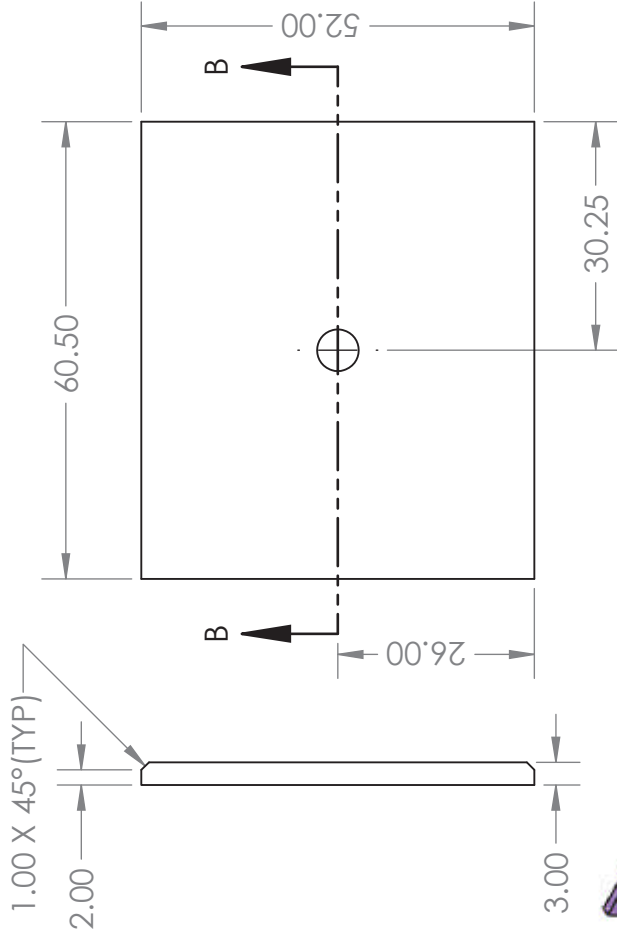
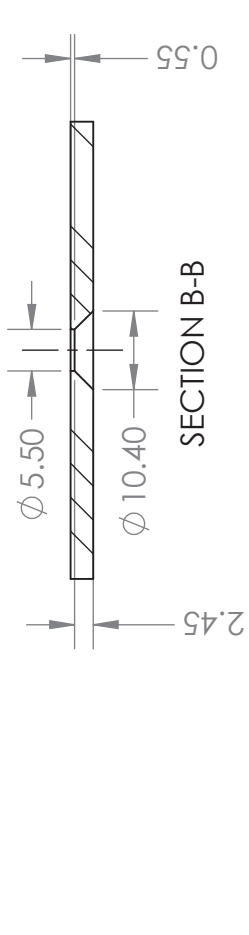
SHEET

1 OF 10

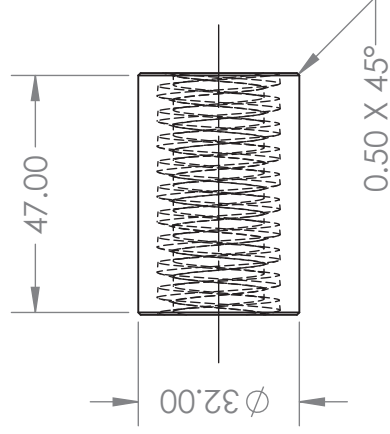
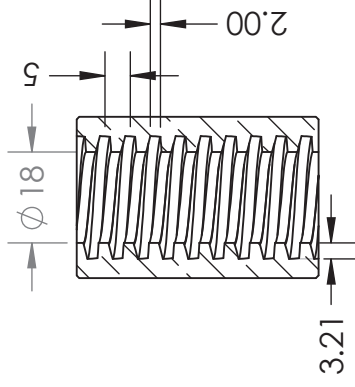
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

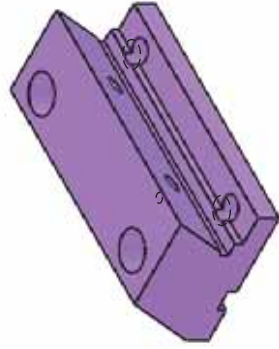
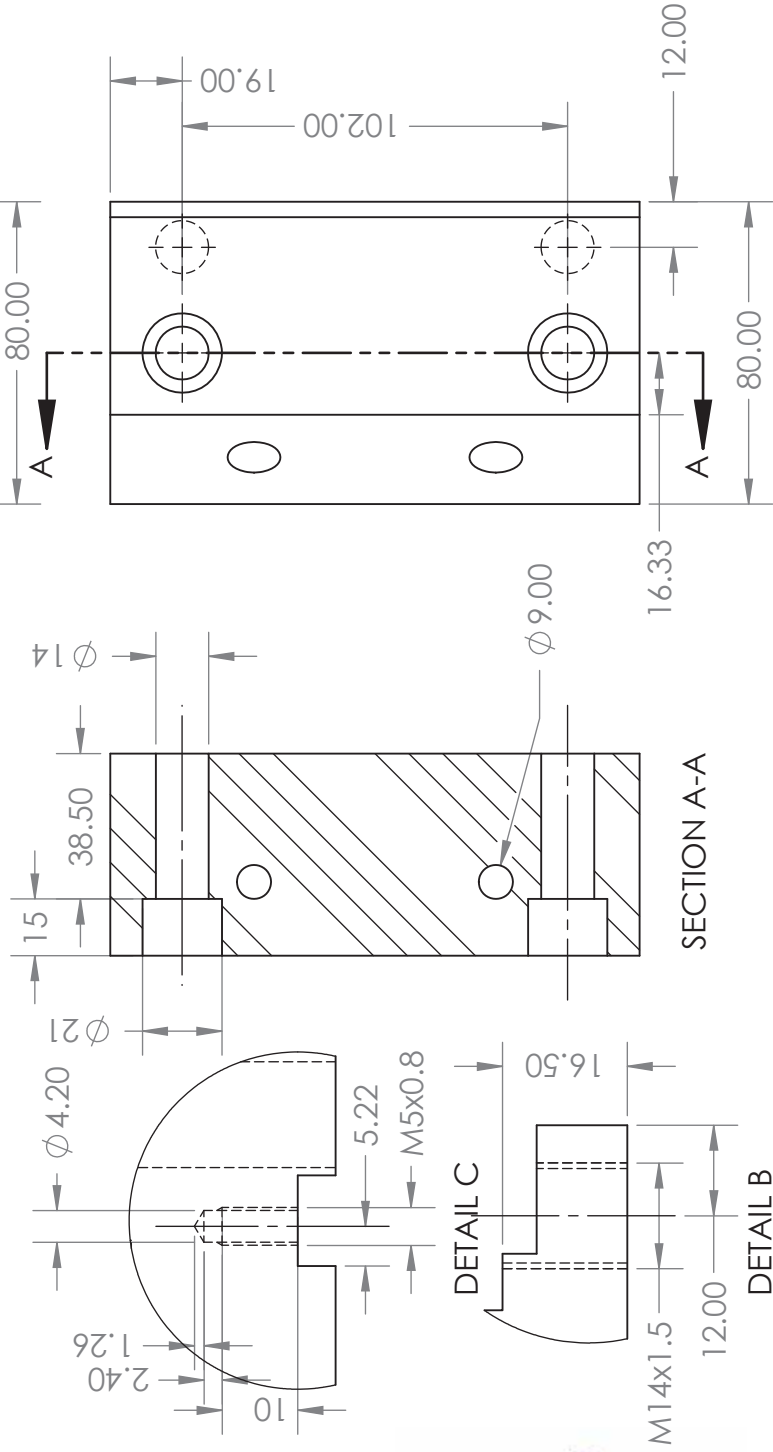
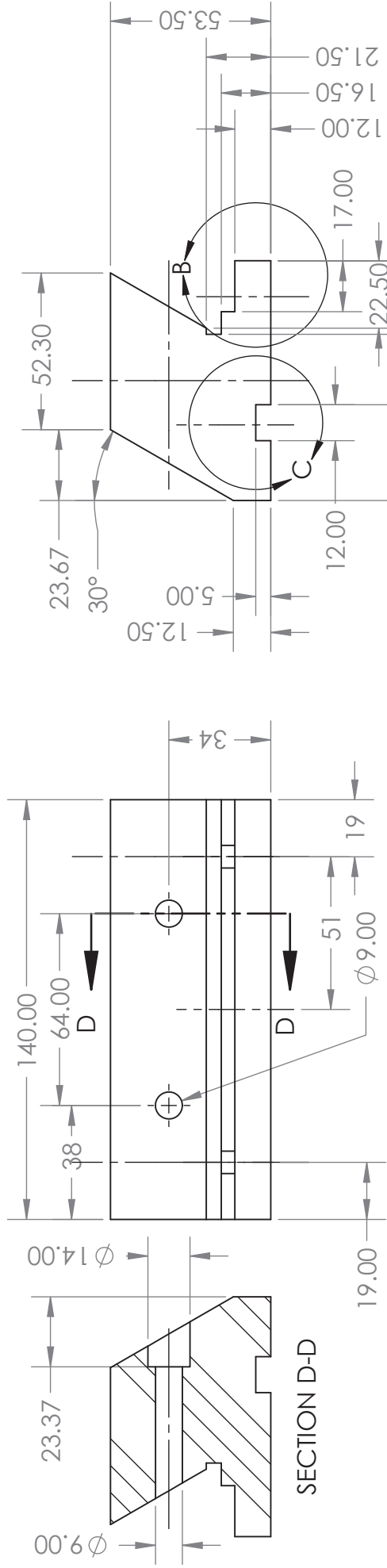


ISOMETRIC VIEW



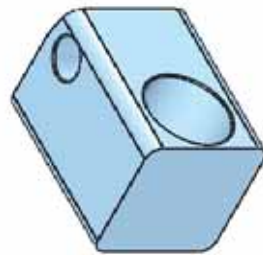
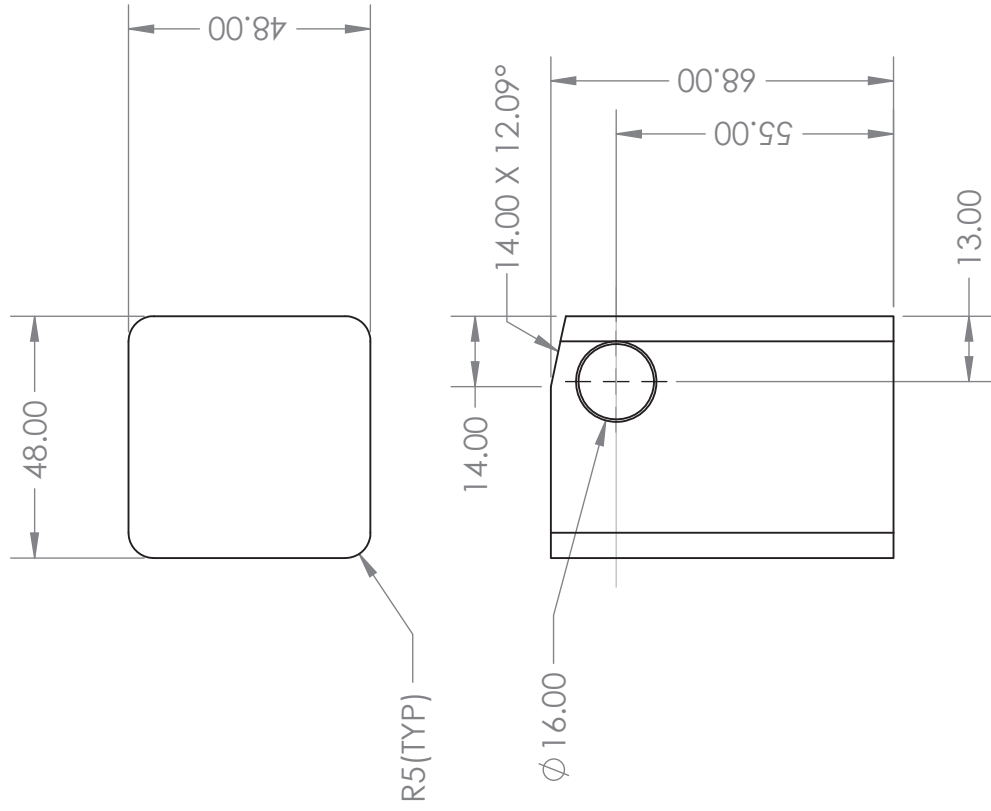
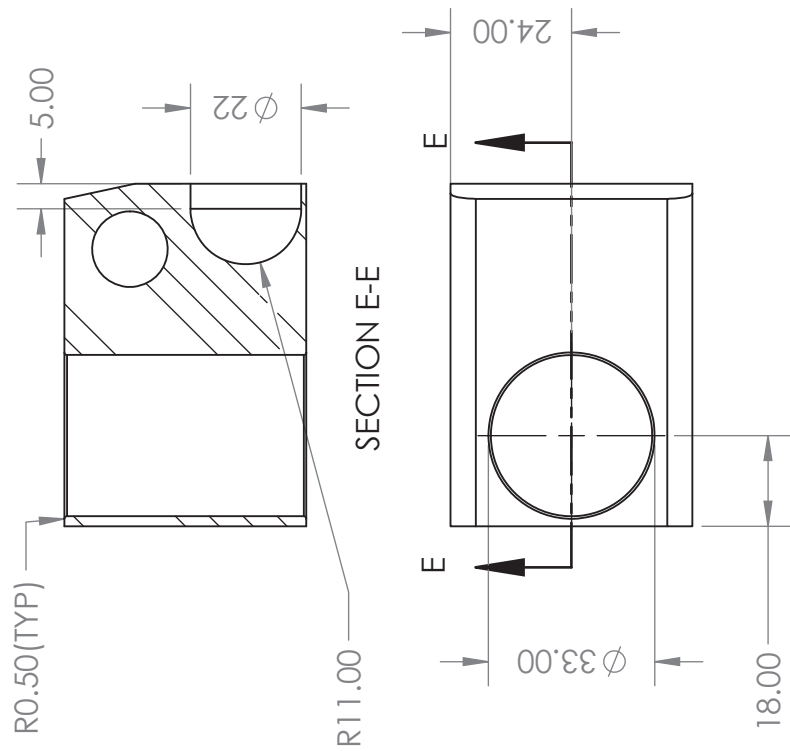
ISOMETRIC VIEW

SECTION F-F 2X ϕ 7.00 THRU ALL M8X1.0 - 6H THRU ALL SECTION G-G 2X ϕ 7.00 THRU ALL M8X1.0 - 6H THRU ALL DETAIL H ISOMETRIC VIEW	ISOMETRIC VIEW	DESCRIPTION. Jaw Plates SHEET 3 OF 10 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM
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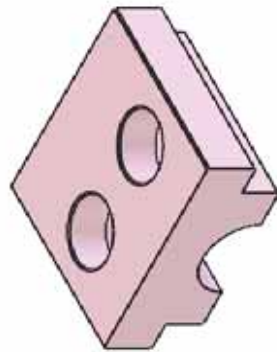
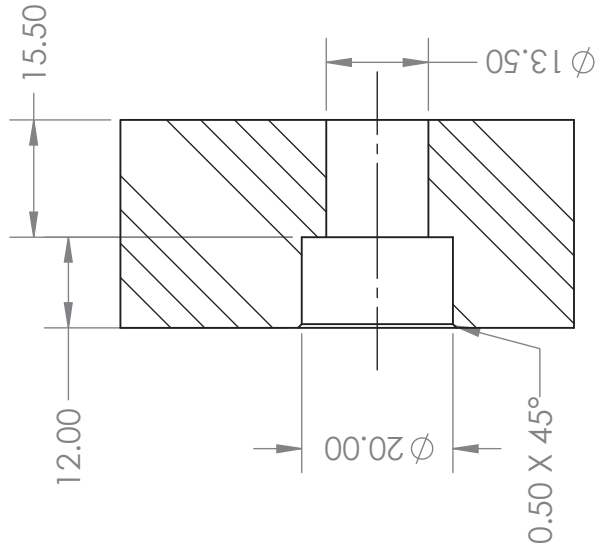
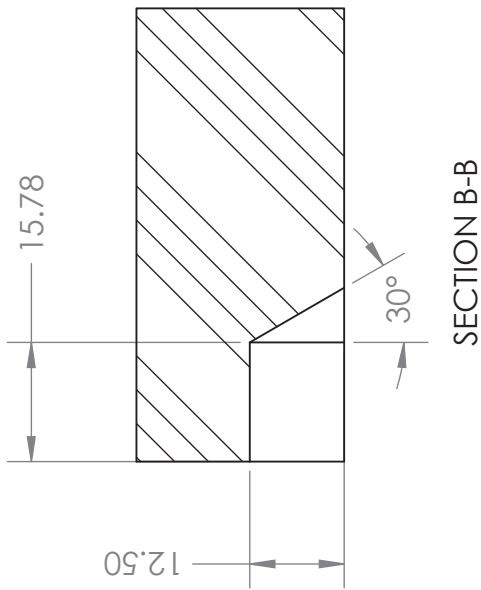
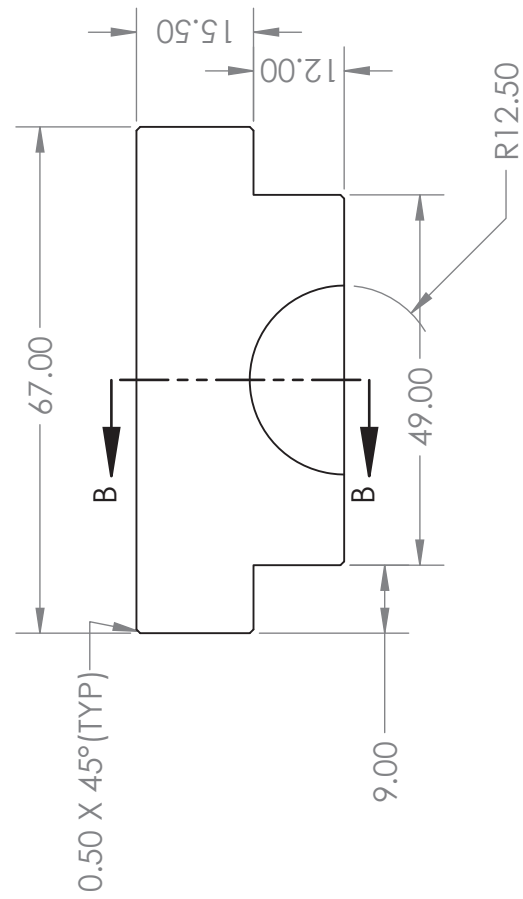
162 ISOMETRIC VIEW

DESCRIPTION.	Fixed Jaw	SHEET	4 OF 10	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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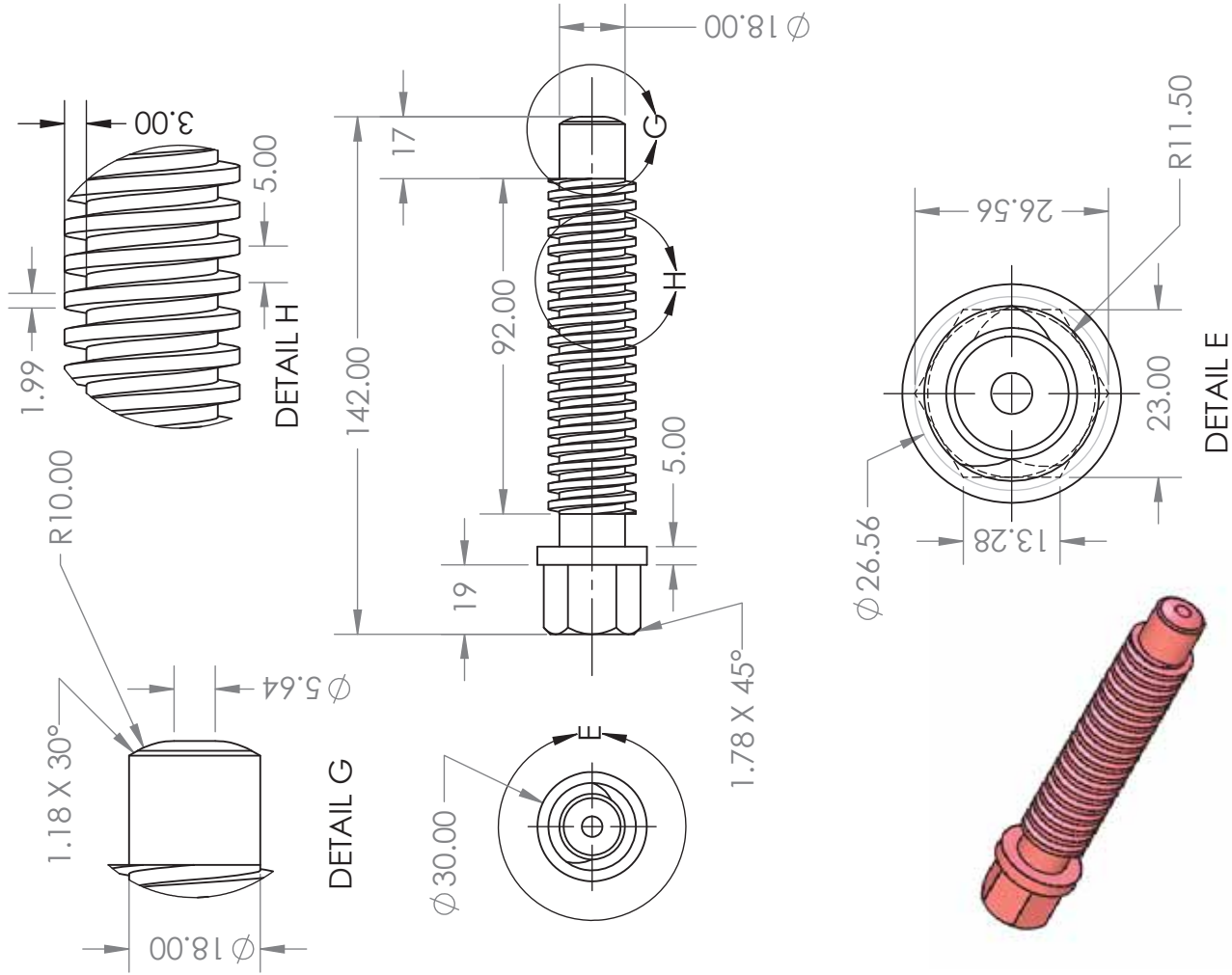
ISOMETRIC VIEW

DESCRIPTION.	Support Block	SHEET	6 OF 10	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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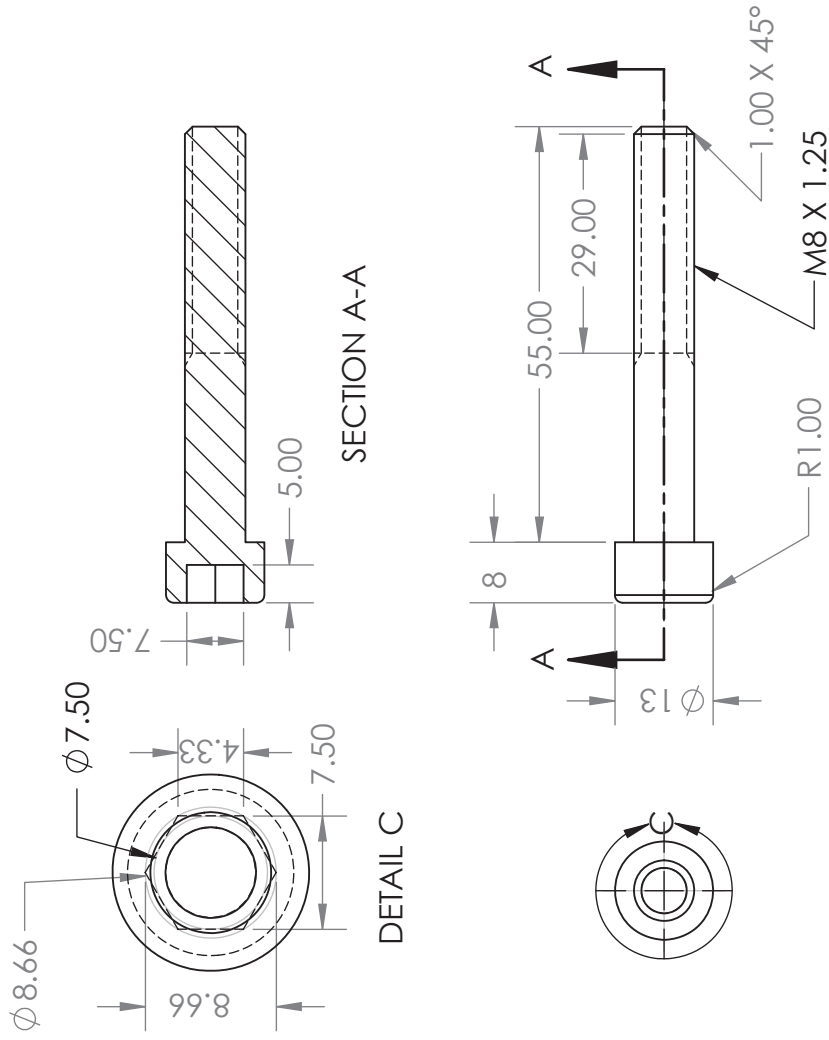


ISOMETRIC VIEW

DESCRIPTION.	T Block	SHEET	8 OF 10	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Spindle & Screw

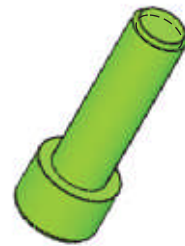
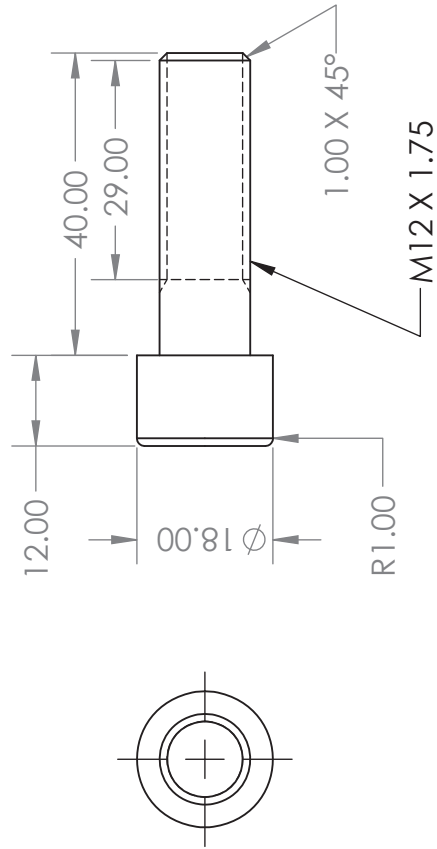
SHEET

9 OF 10

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.

Screws

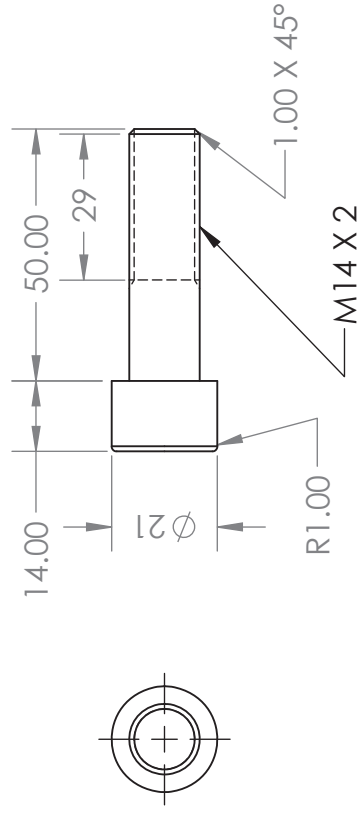
SHEET

10 OF 10

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



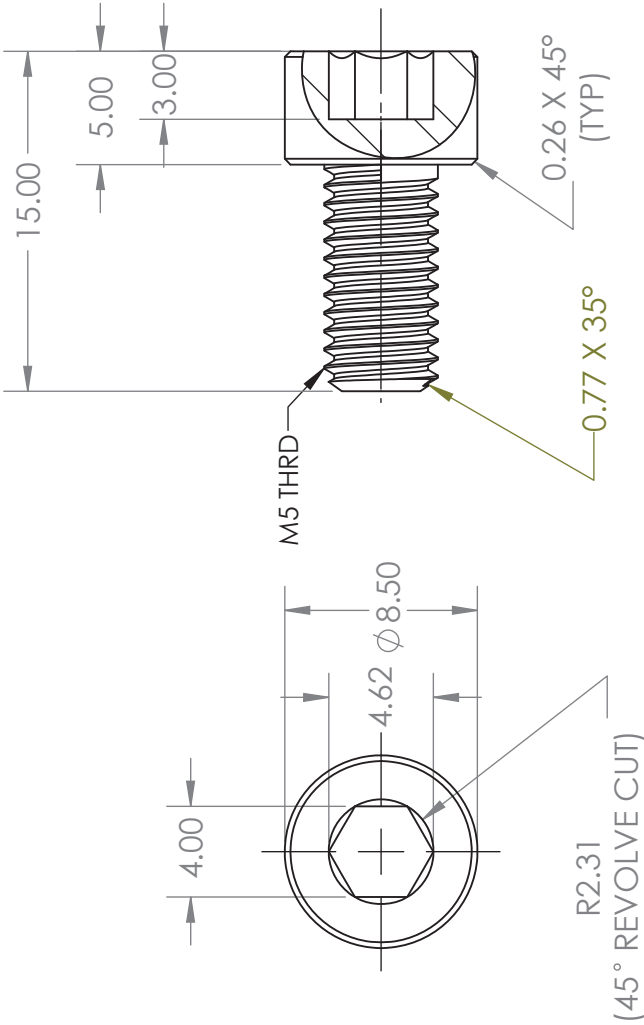
ISOMETRIC VIEW

MINI PLATE CLAMP

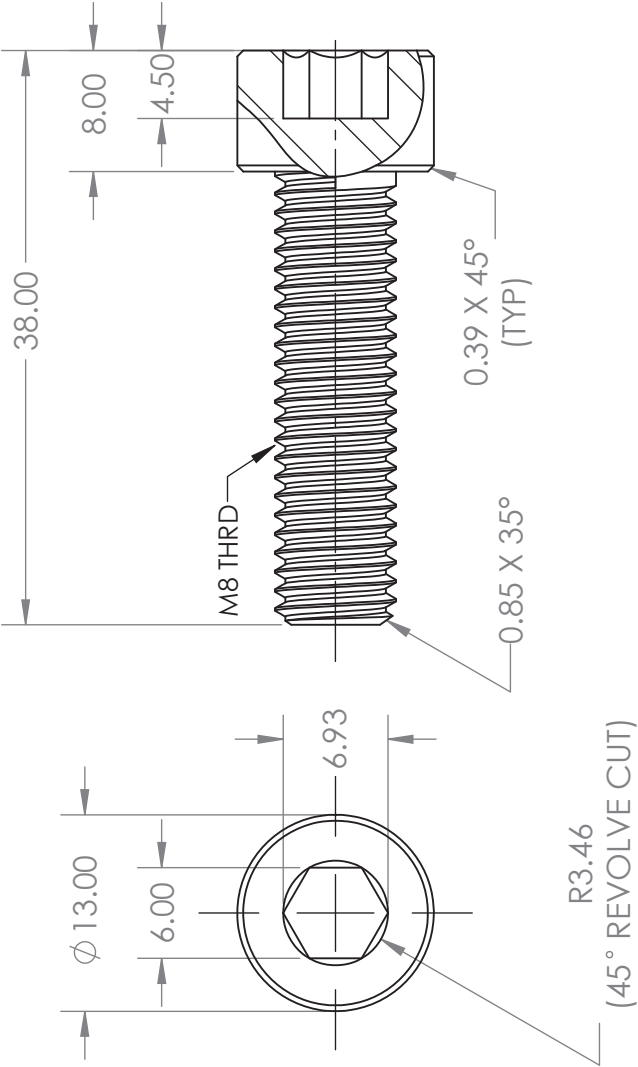


1060-1510-SOC

1060-1830-SOC



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Screws

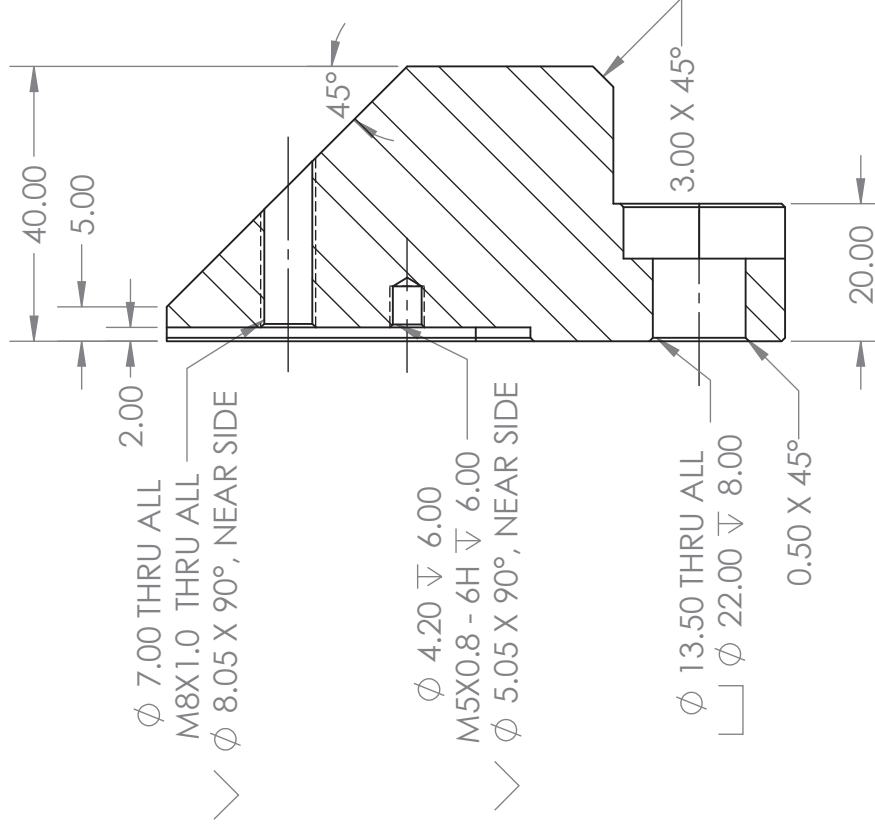
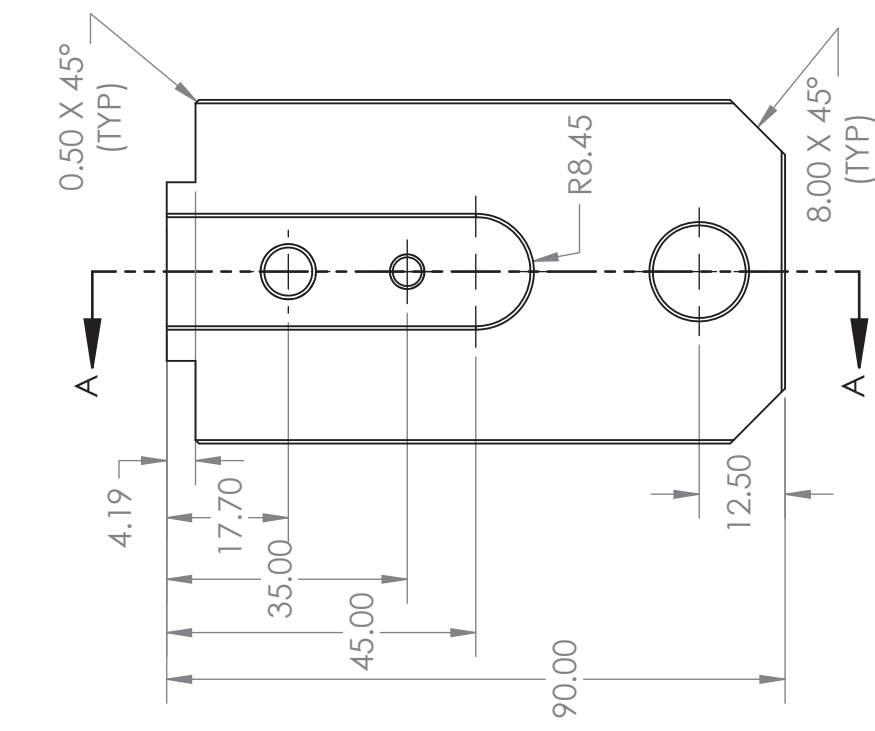
SHEET

1 OF 4

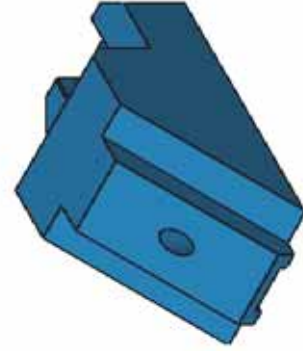
ANGLE OF PROJECTION



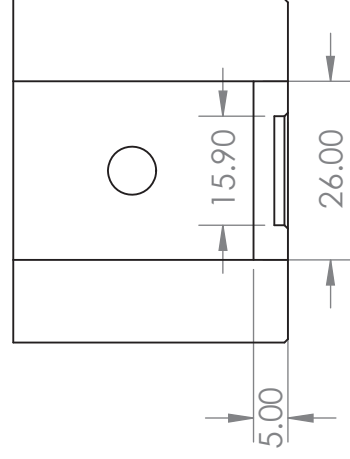
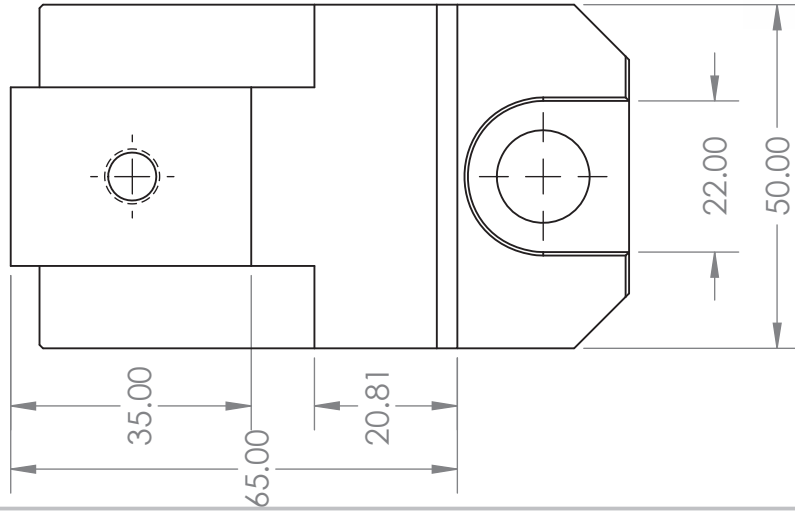
ALL DIMENSIONS ARE IN MM



SECTION A-A



ISOMETRIC VIEW



DESCRIPTION. Fixed Base

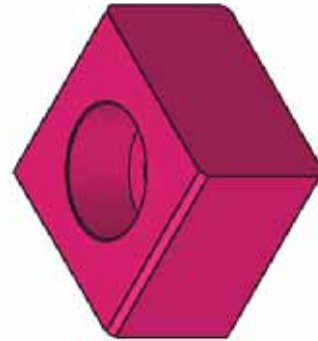
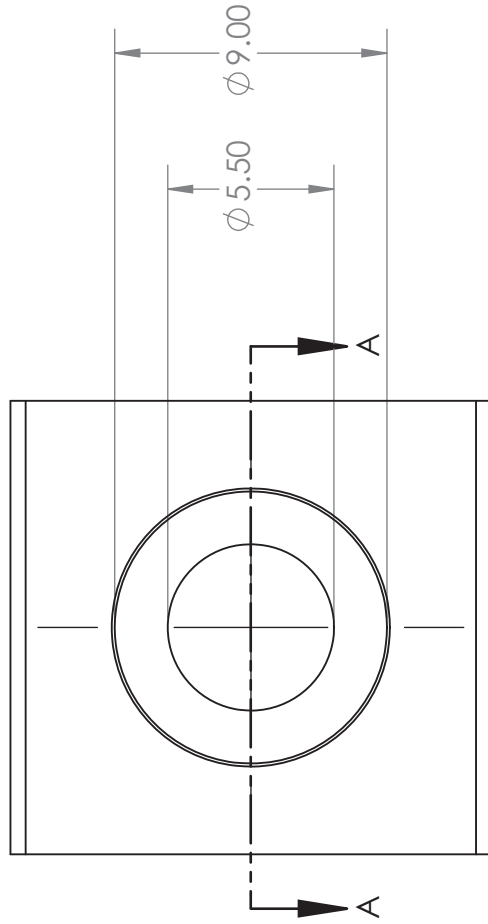
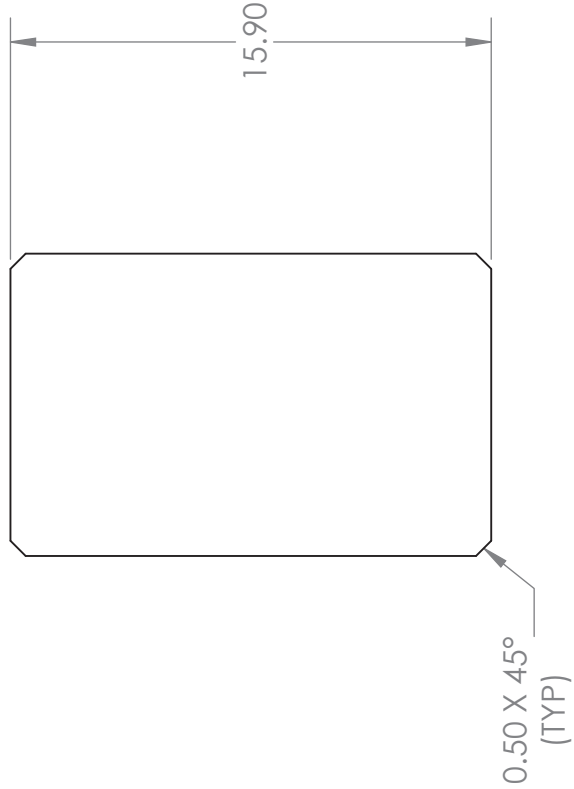
SHEET

2 OF 4

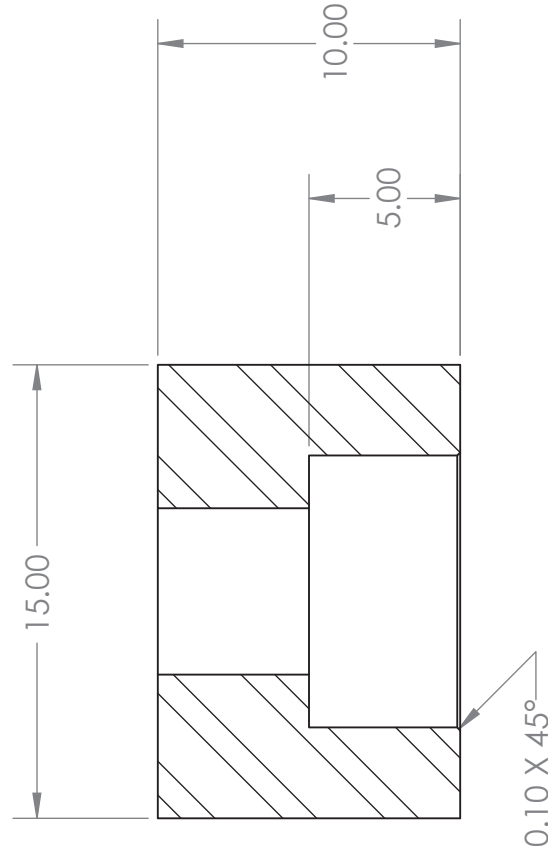
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



SECTION A-A

DESCRIPTION.

Screw Holder

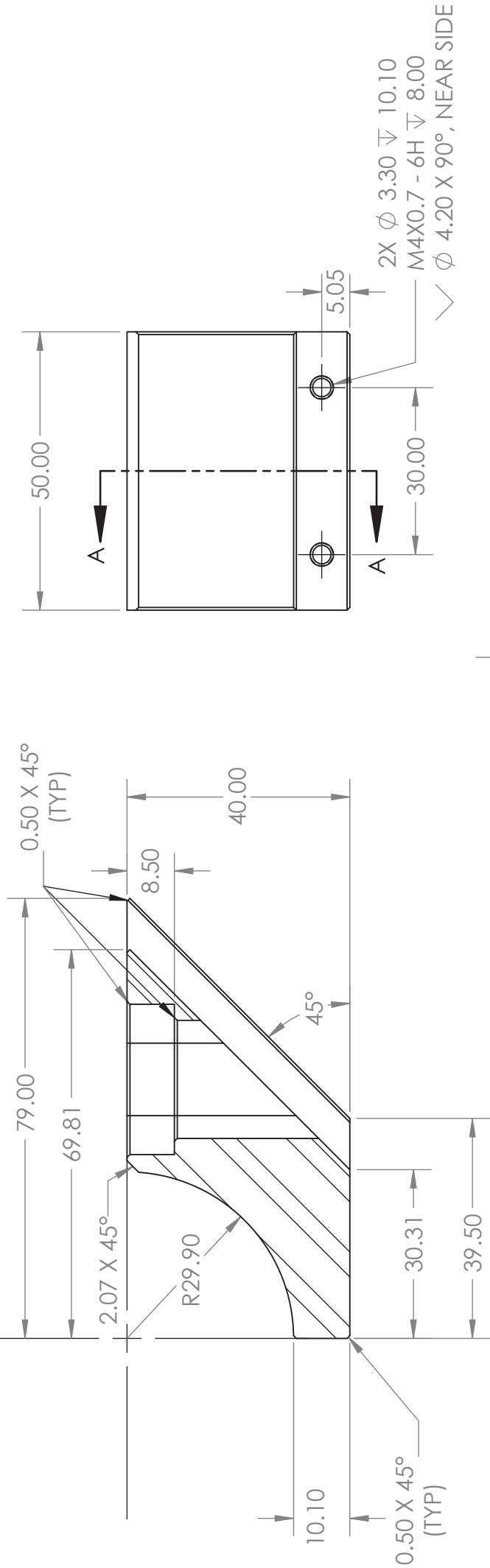
SHEET

3 OF 4

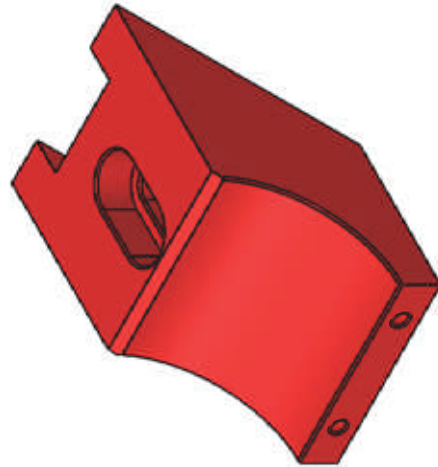
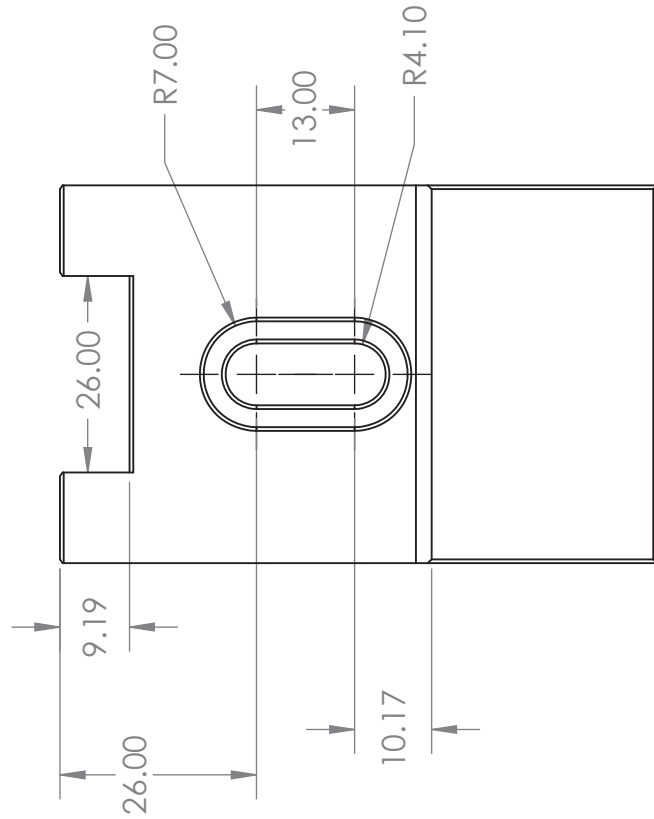
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



SECTION A-A

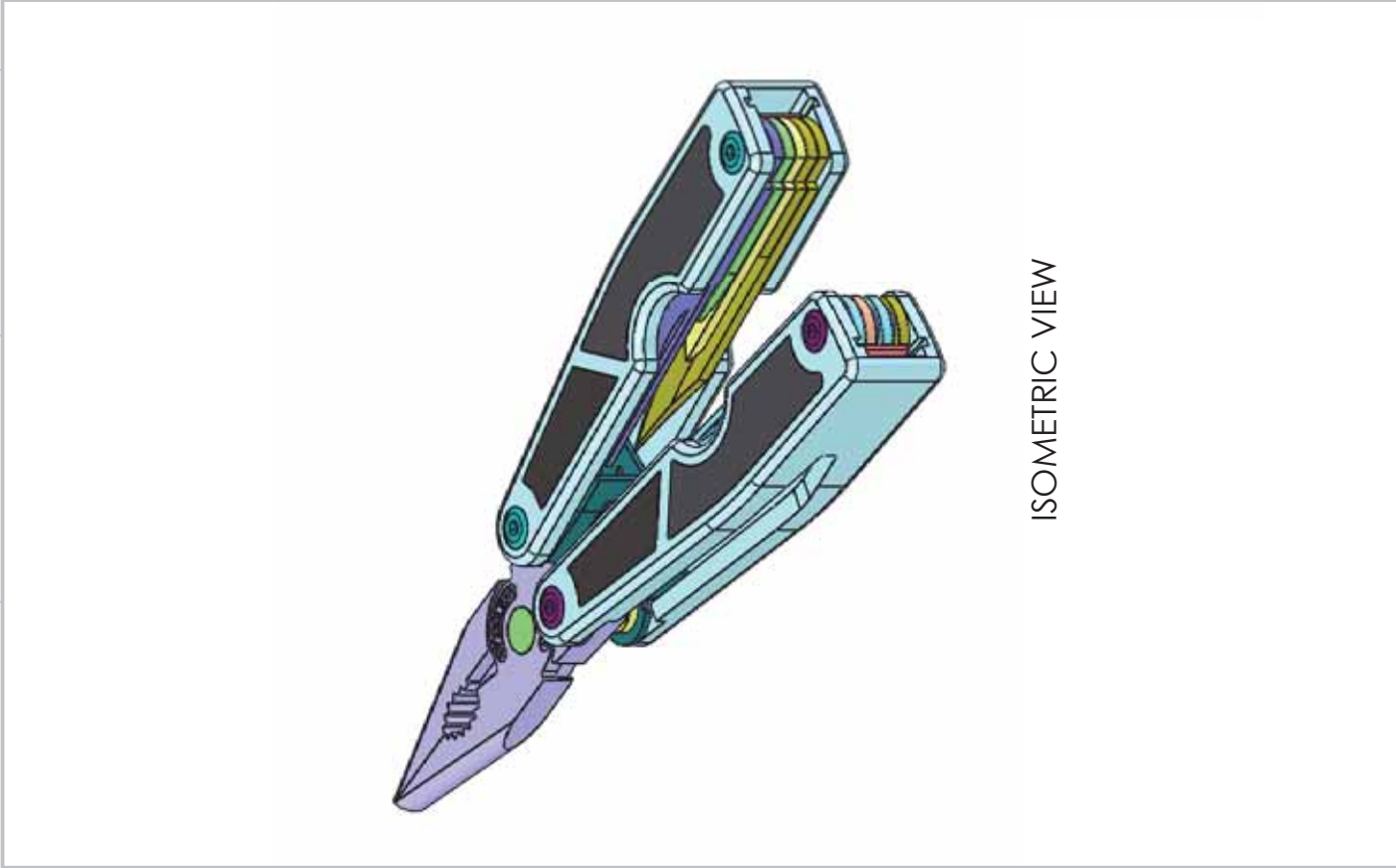
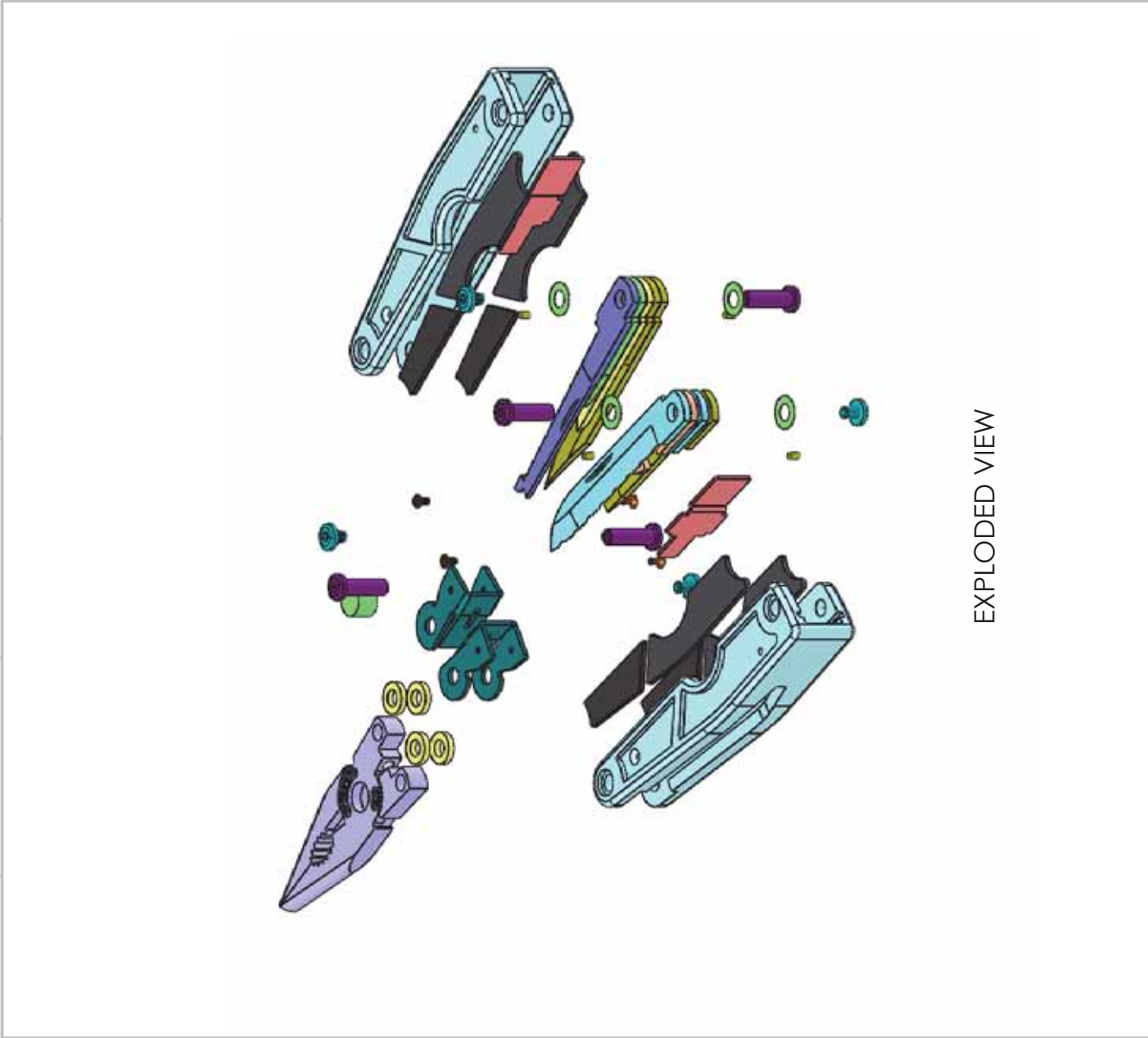


ISOMETRIC VIEW

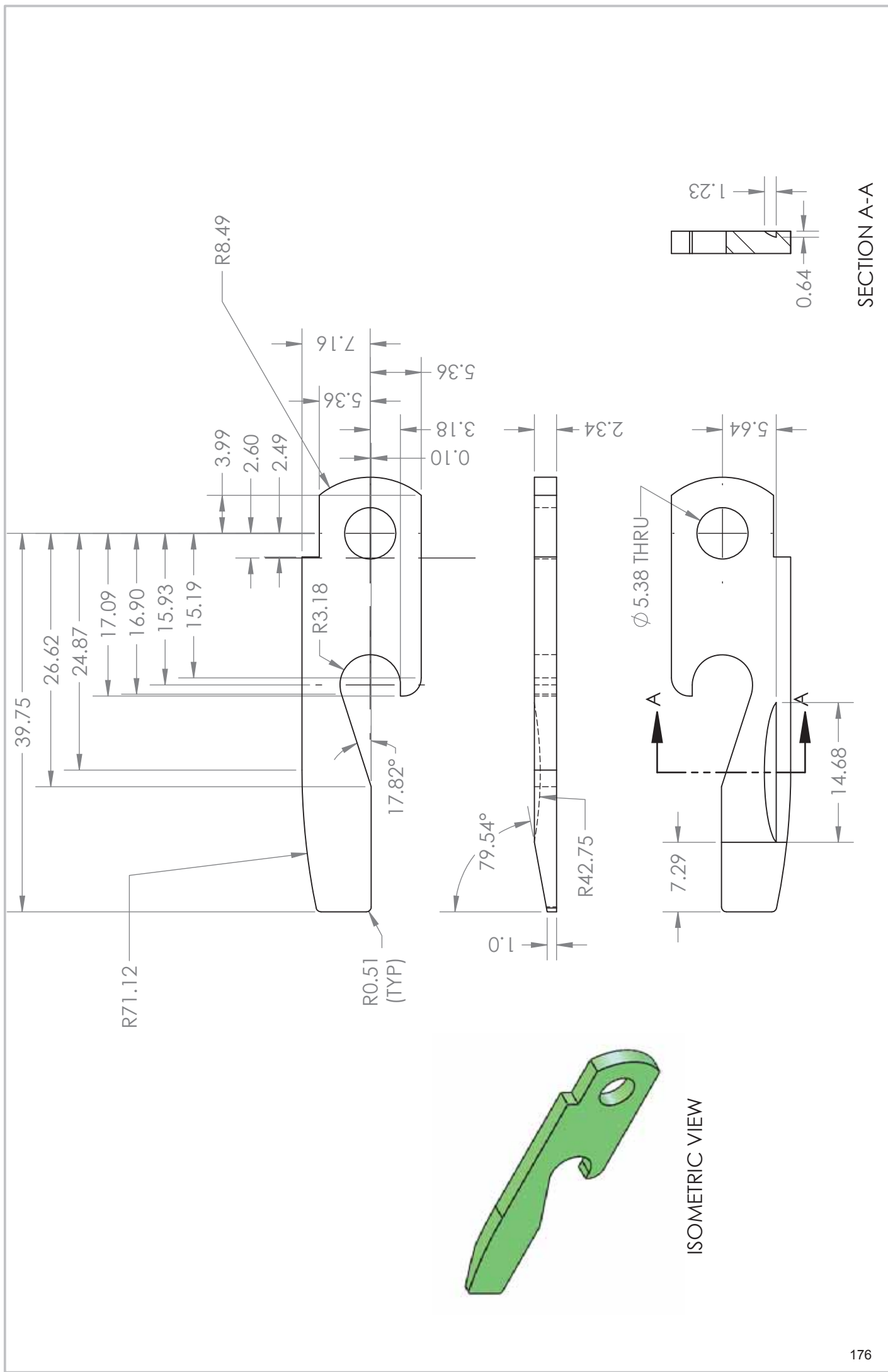
DESCRIPTION: Clamp Slider	SHEET 4 OF 4	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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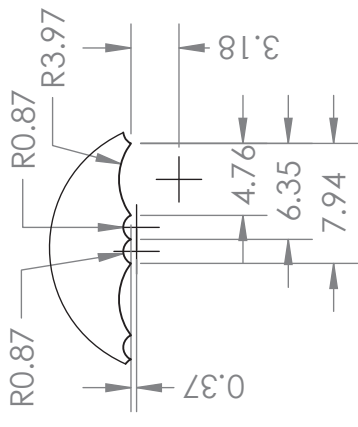
MULTI-TOOL PLIER



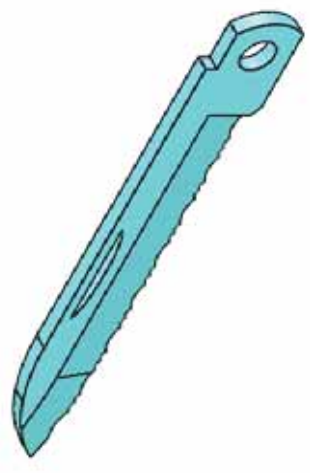
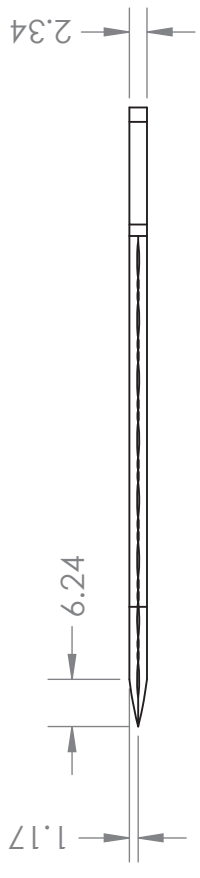
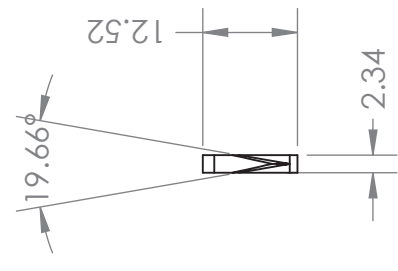


DESCRIPTION: Plier Multi Tools_EXPLODED VIEW			SHEET 1 OF 1		ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM		A3
8	7	6	5	4	3	2	1		

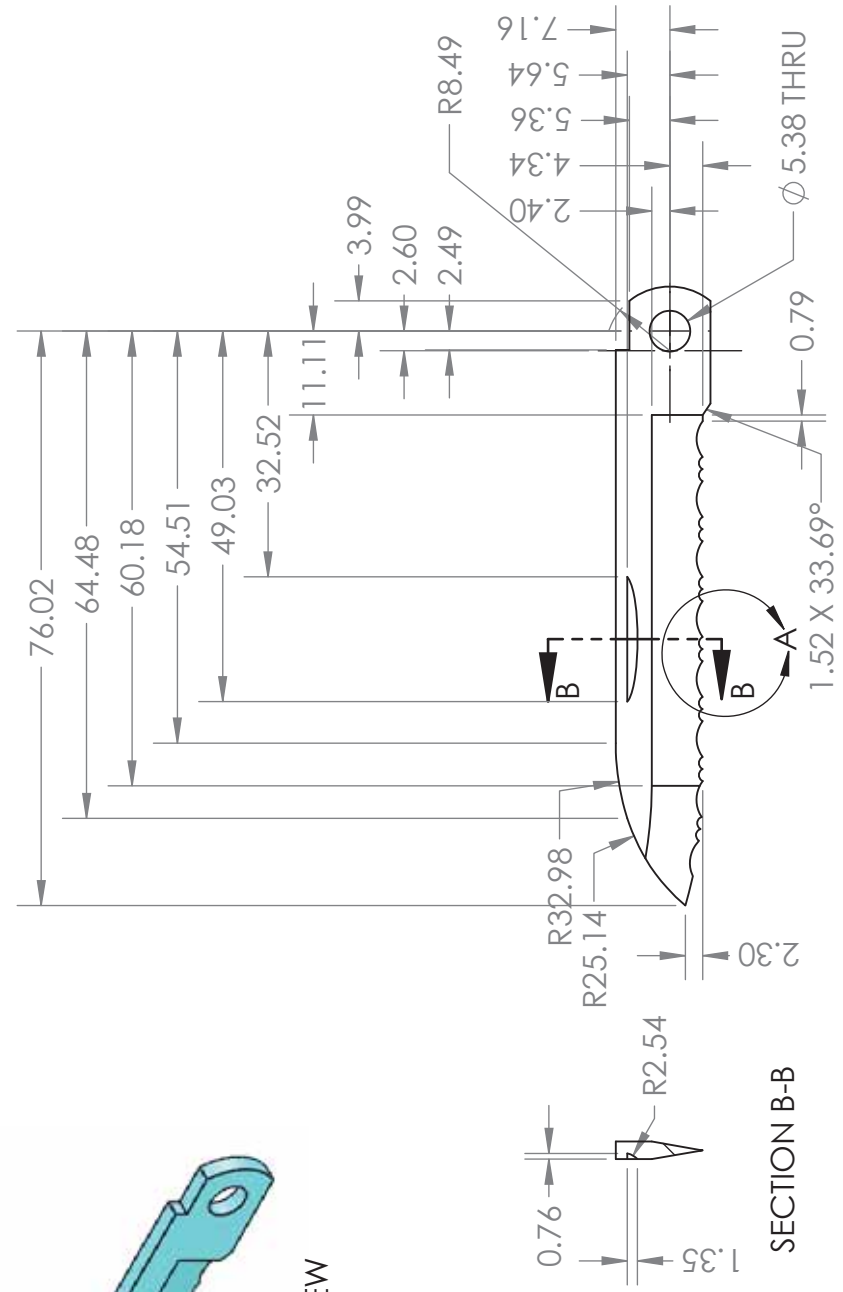




DETAIL A



ISOMETRIC VIEW



SECTION B-B

DESCRIPTION.	BLADE SAW	SHEET 1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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8

7

6

5

4

3

2

1

F

E

D

C

B

A

DESCRIPTION:

Body-PART1

SHEET 1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

A3

8

7

6

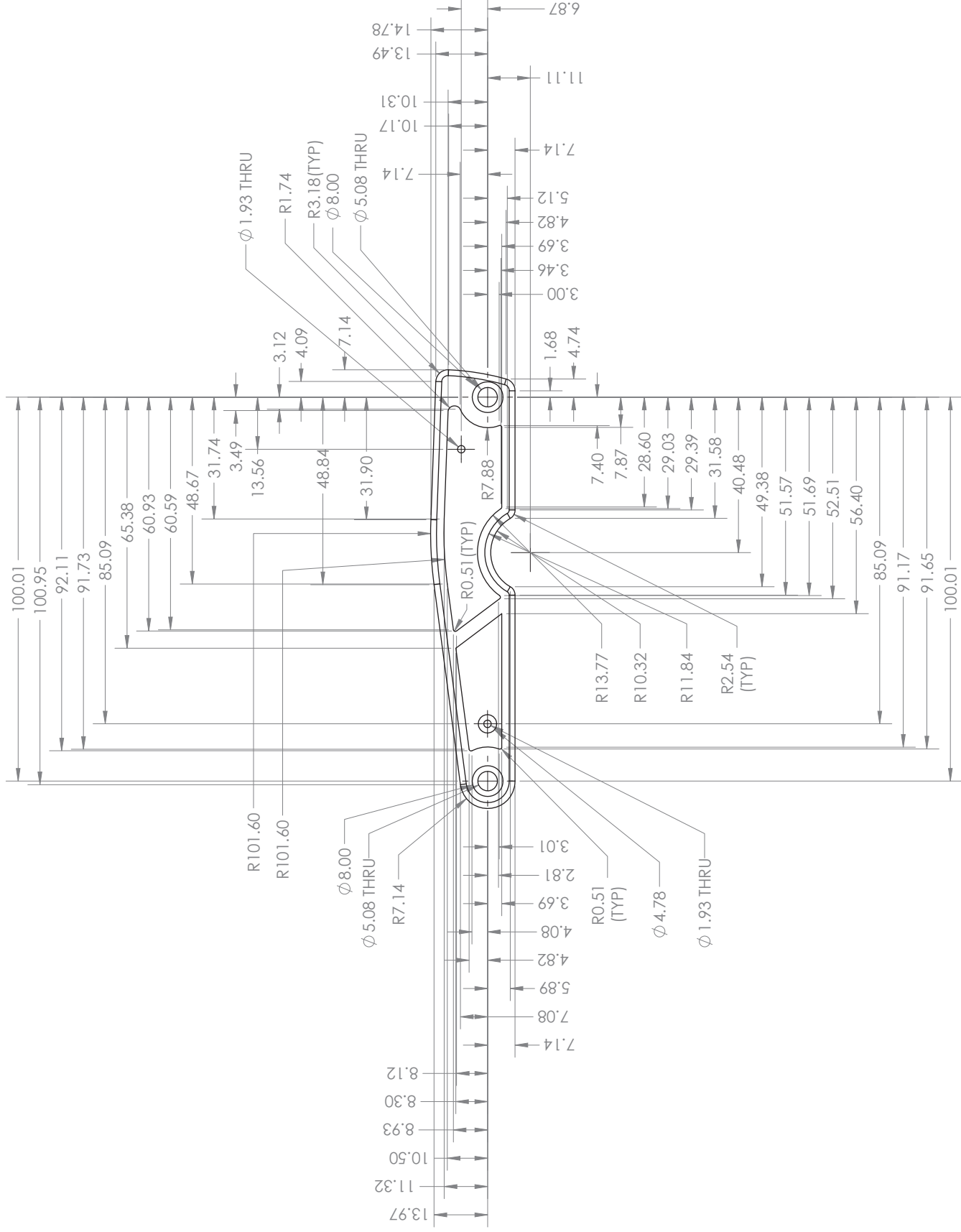
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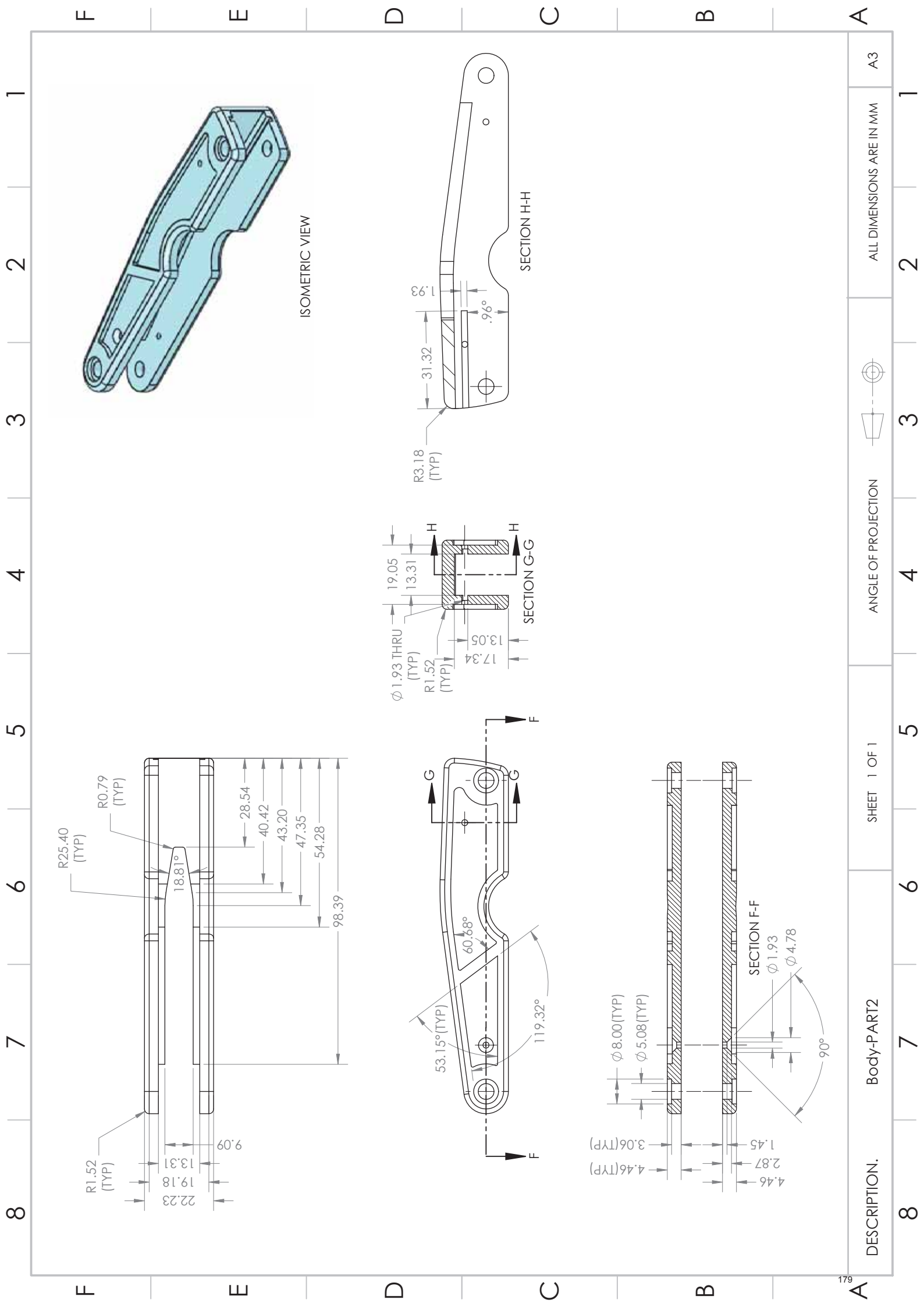
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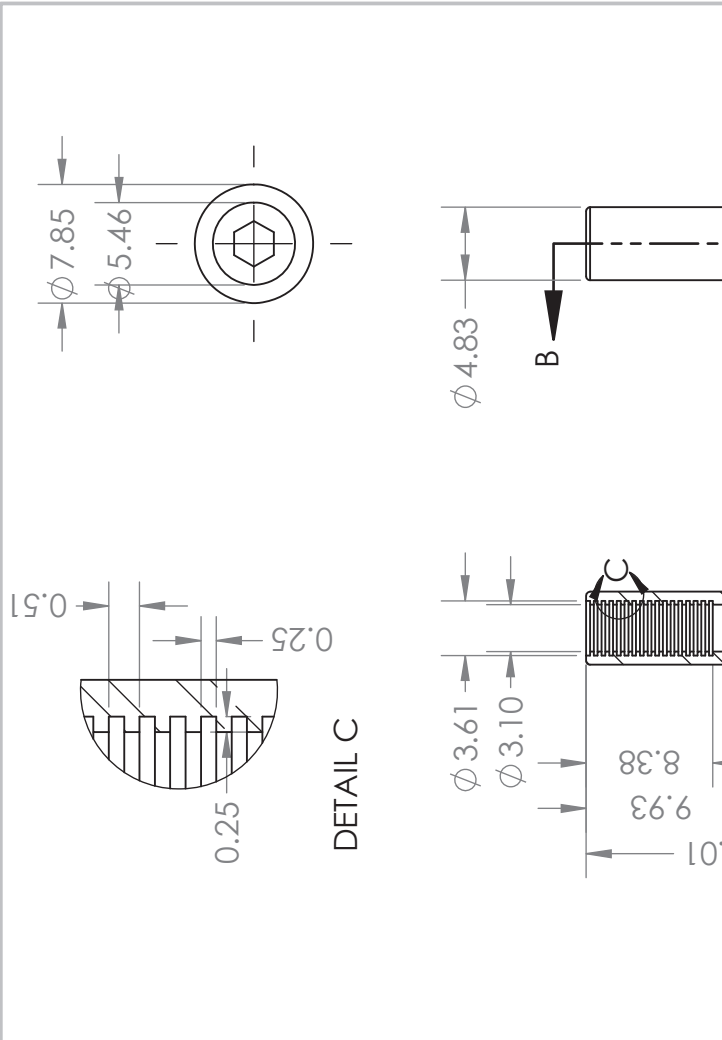
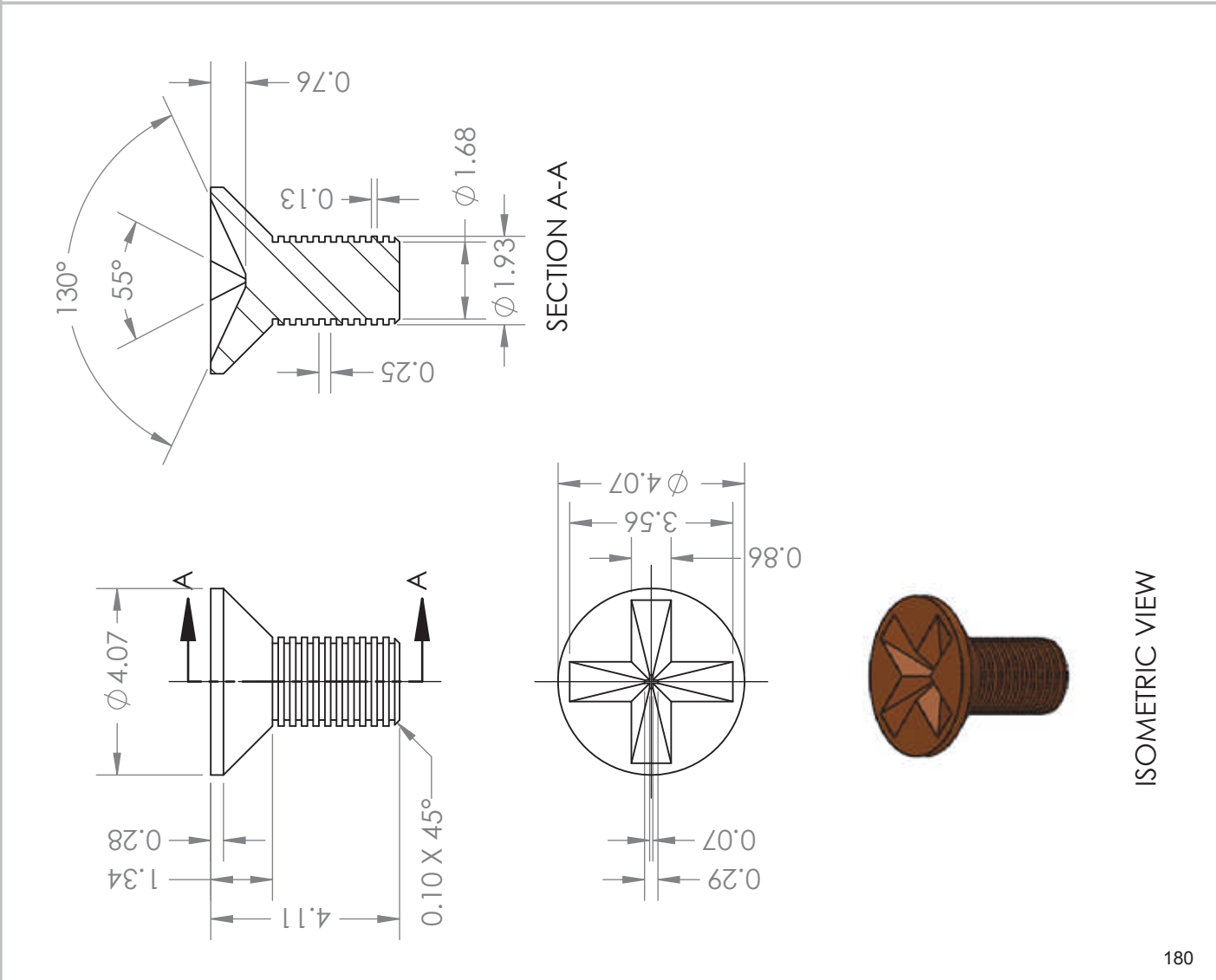
3

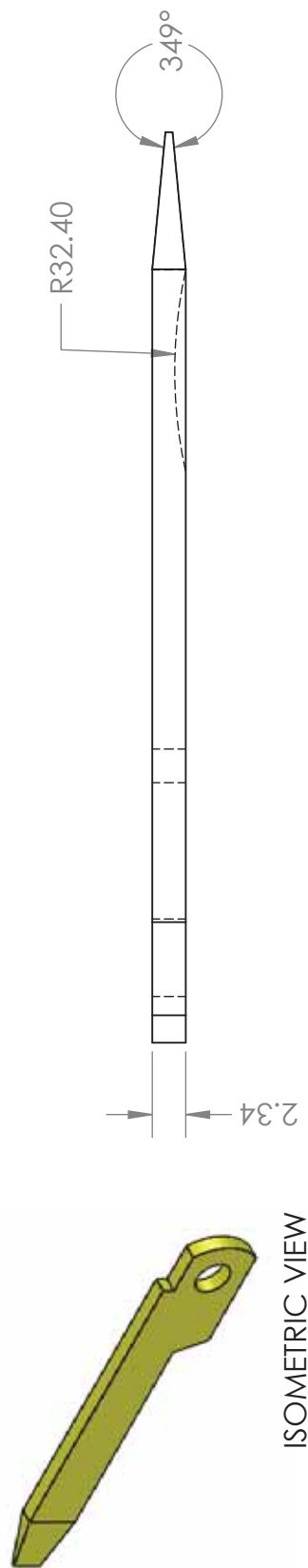
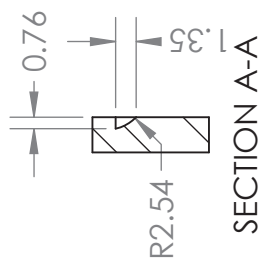
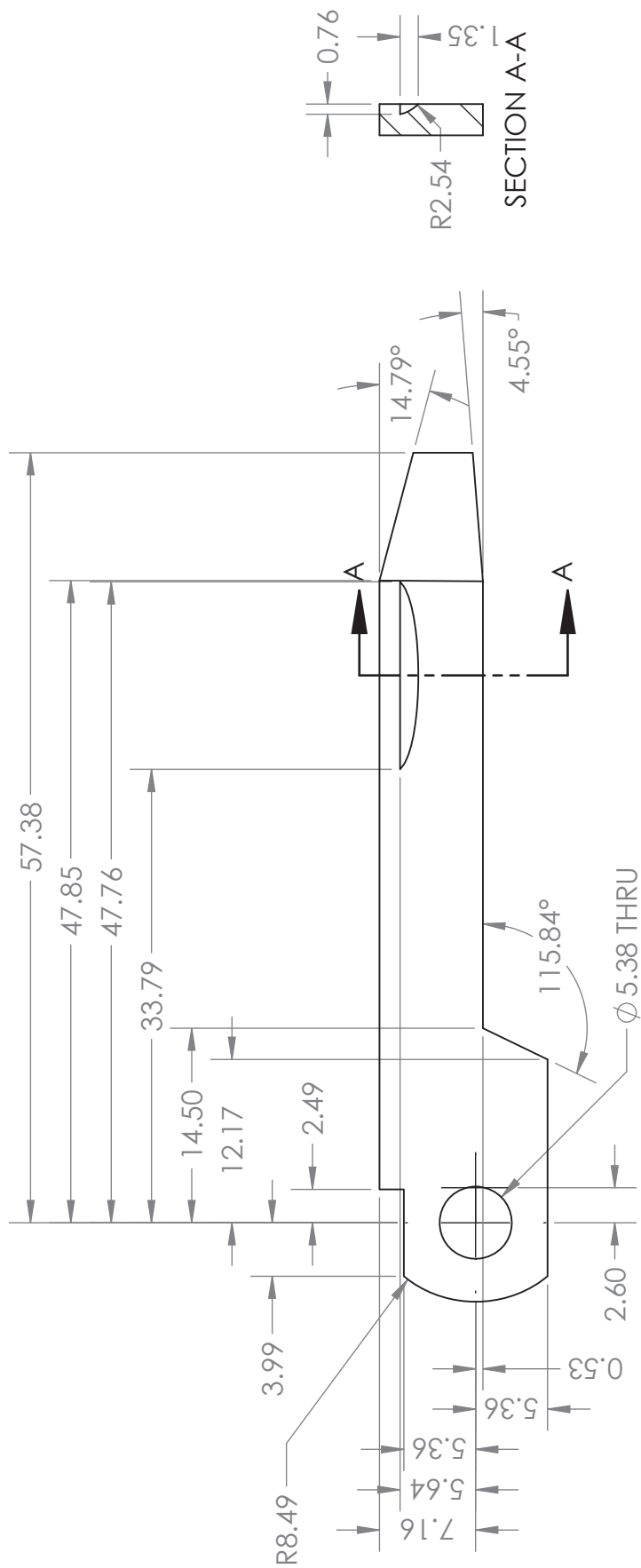
2

1

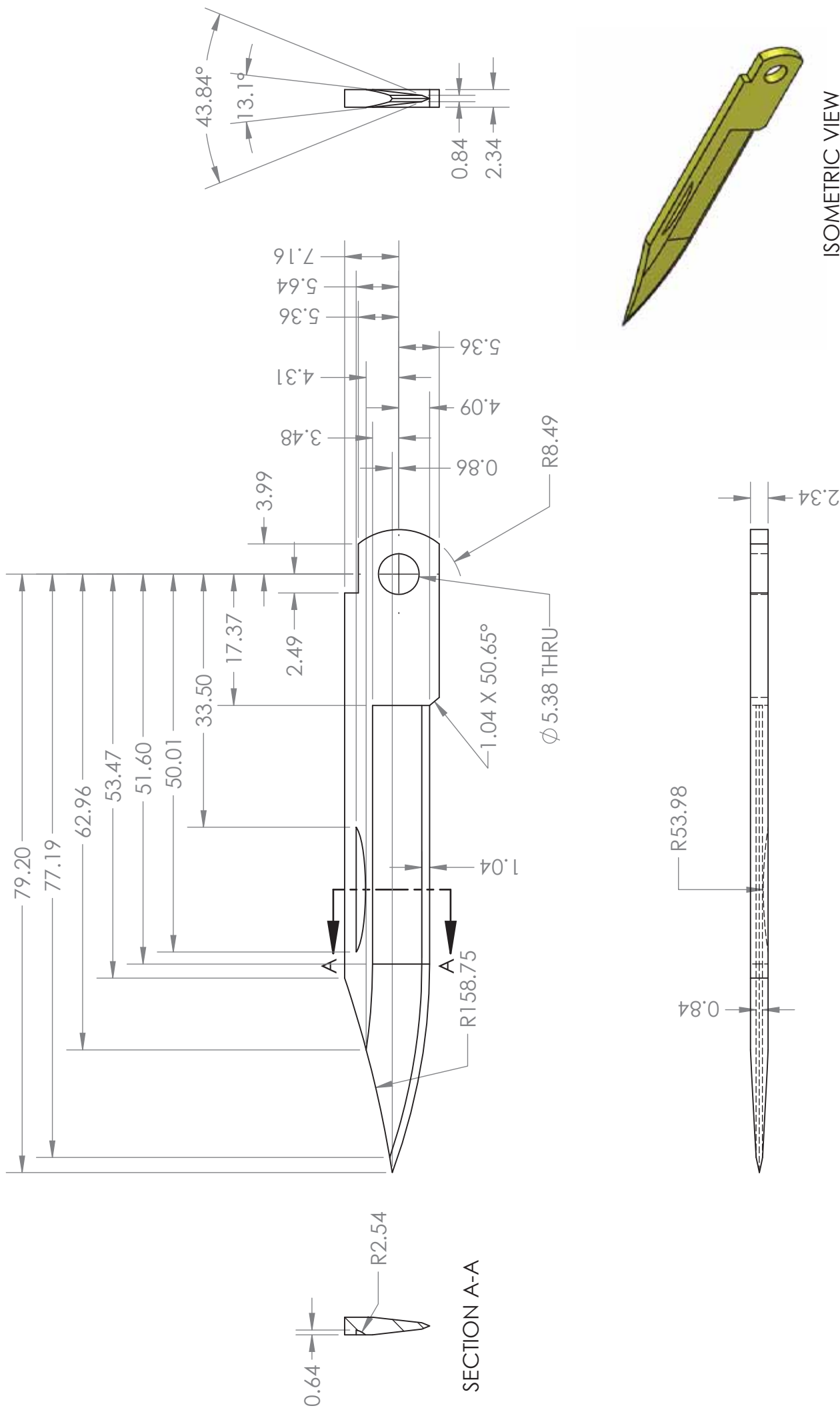




 Technical drawing of a bolt and nut assembly. The drawing includes a front view, a detail view of the head, a section view, and a detail view of the nut. Dimensions are provided in millimeters. Front View Dimensions: - Head Diameter: $\phi 7.85$ - Head Thickness: 5.46 - Head Width: 0.51 Detail View Dimensions: - Head Thickness: 0.25 - Head Width: 0.25 Section View Dimensions: - Total Length: 18.01 - Thread Length: 9.93 - Thread Diameter: $\phi 3.61$ - Thread Pitch: 3.10 - Head Diameter: $\phi 4.83$ - Head Thickness: 1.35 - Head Width: 1.88 Detail View Dimensions: - Head Thickness: 0.25 - Head Width: 0.25	 Technical drawing of a bolt and nut assembly. The drawing includes a front view, a detail view of the head, a section view, and a detail view of the nut. Dimensions are provided in millimeters. Front View Dimensions: - Head Diameter: $\phi 4.07$ - Head Thickness: 0.28 - Head Width: 1.34 - Head Length: 4.11 Detail View Dimensions: - Head Thickness: 0.10 - Head Width: 45° Section View Dimensions: - Total Length: 0.86 - Thread Length: 4.07 - Thread Diameter: $\phi 3.56$ - Thread Pitch: 0.07 - Head Diameter: $\phi 4.07$ - Head Thickness: 0.29 - Head Width: 0.86 Detail View Dimensions: - Head Thickness: 0.25 - Head Width: 0.25		
DESCRIPTION. bolt & F. Pin	SHEET 1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM



DESCRIPTION.	FL SC. DR.	SHEET 1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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DESCRIPTION.

LONG

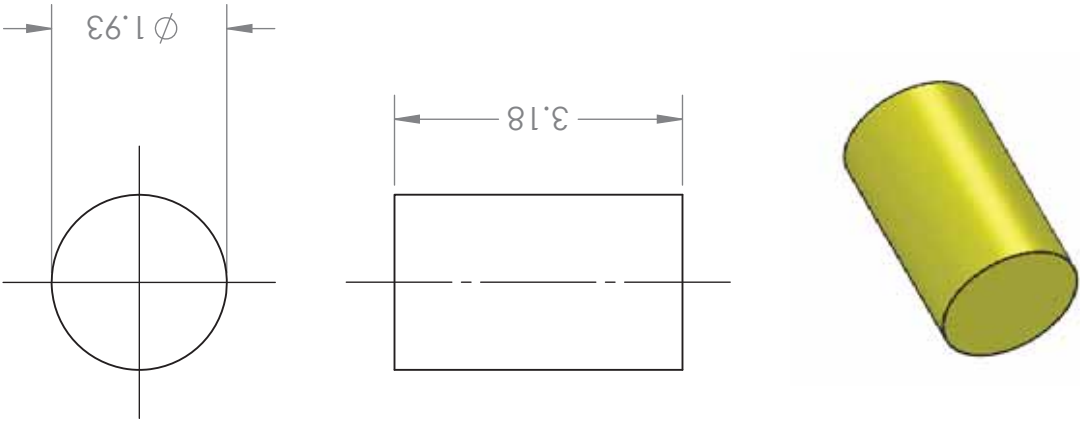
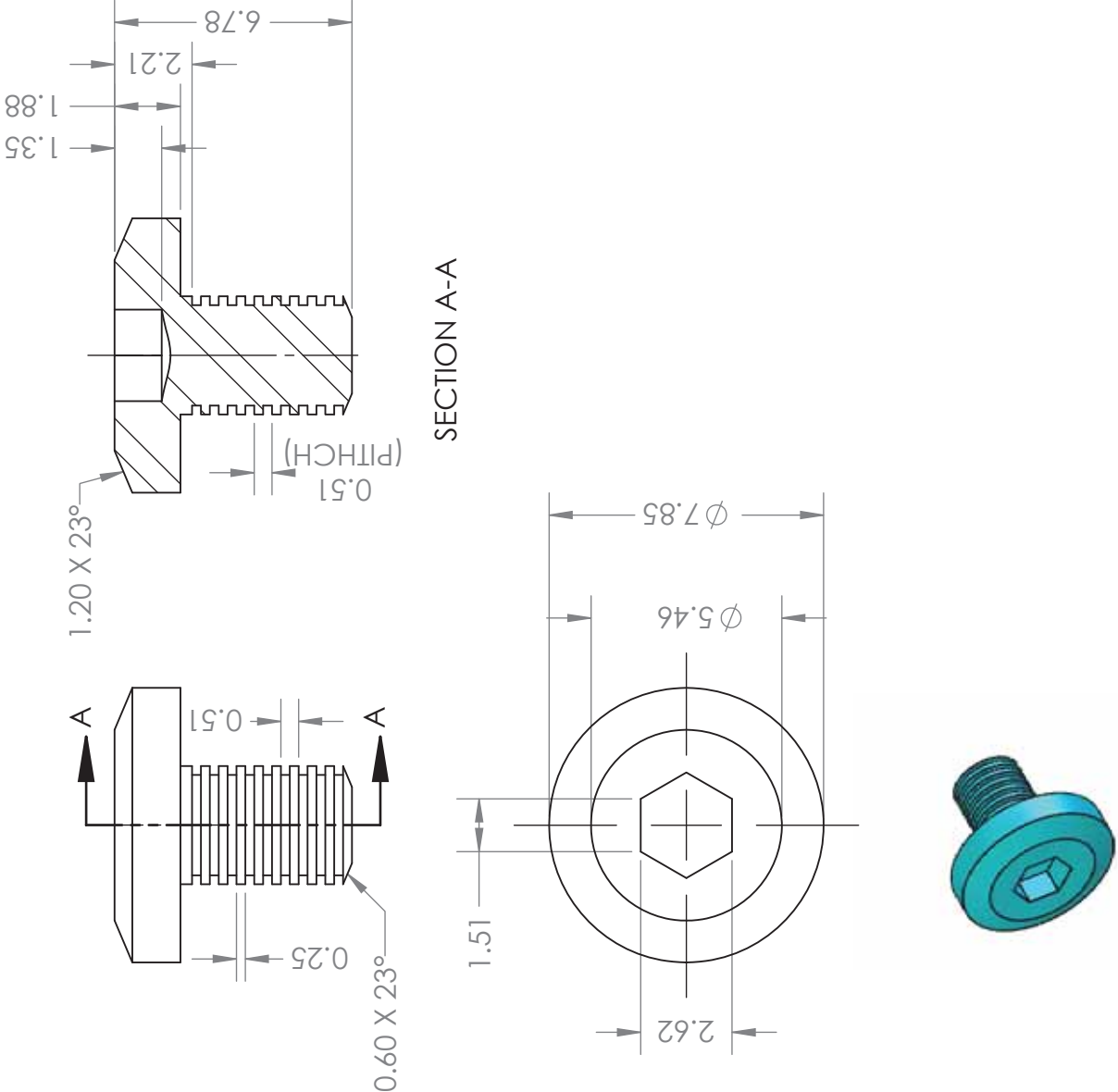
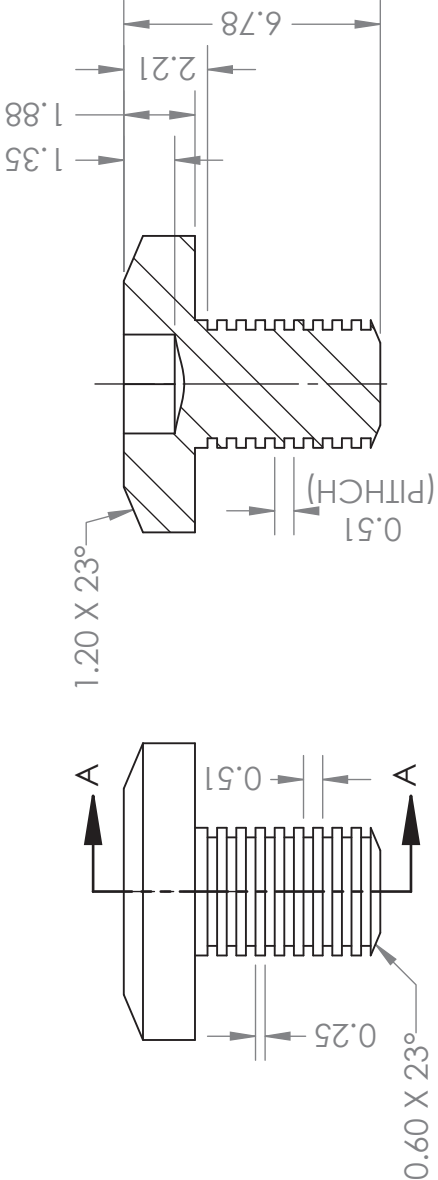
SHEET

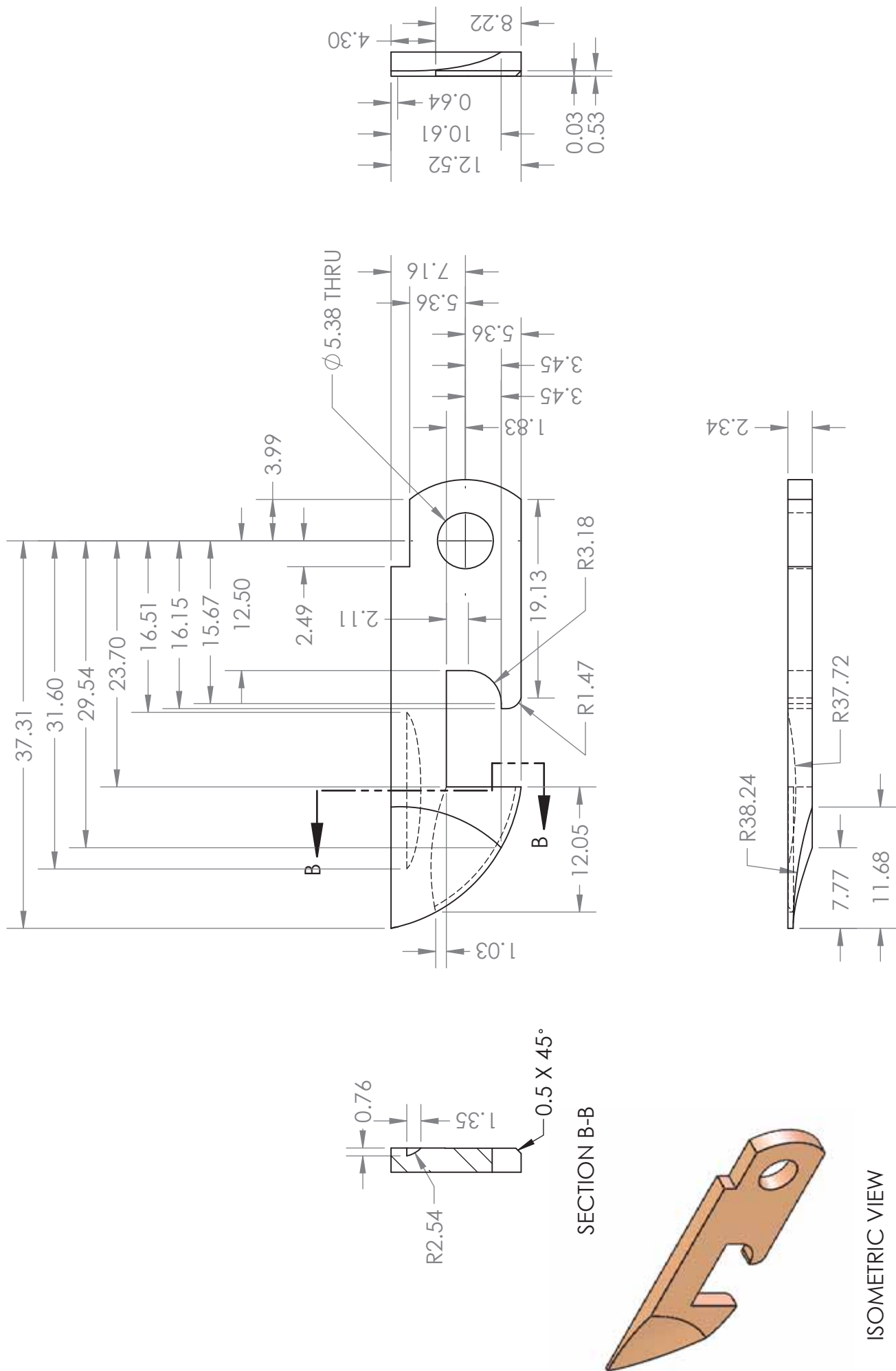
1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

 ISOMETRIC VIEW	 ISOMETRIC VIEW SECTION A-A  DESCRIPTION. M. Pin & PIN SHEET 1 OF 1 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM 			
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DESCRIPTION.

OPENER

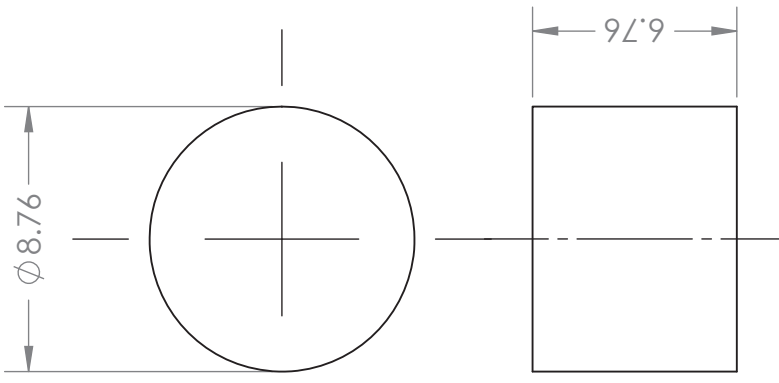
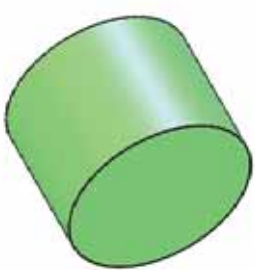
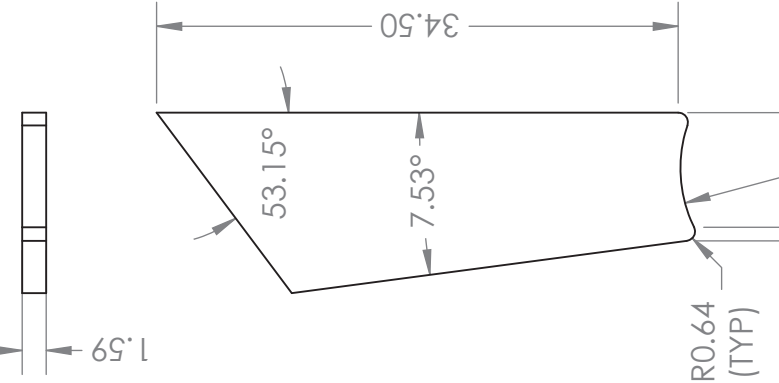
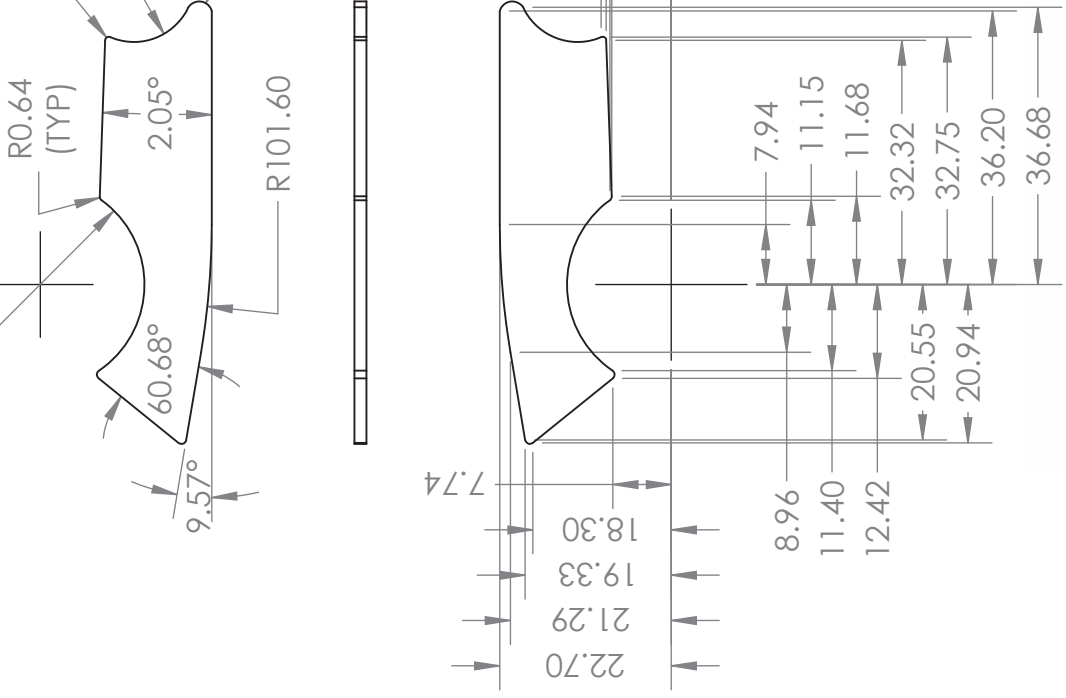
SHEET

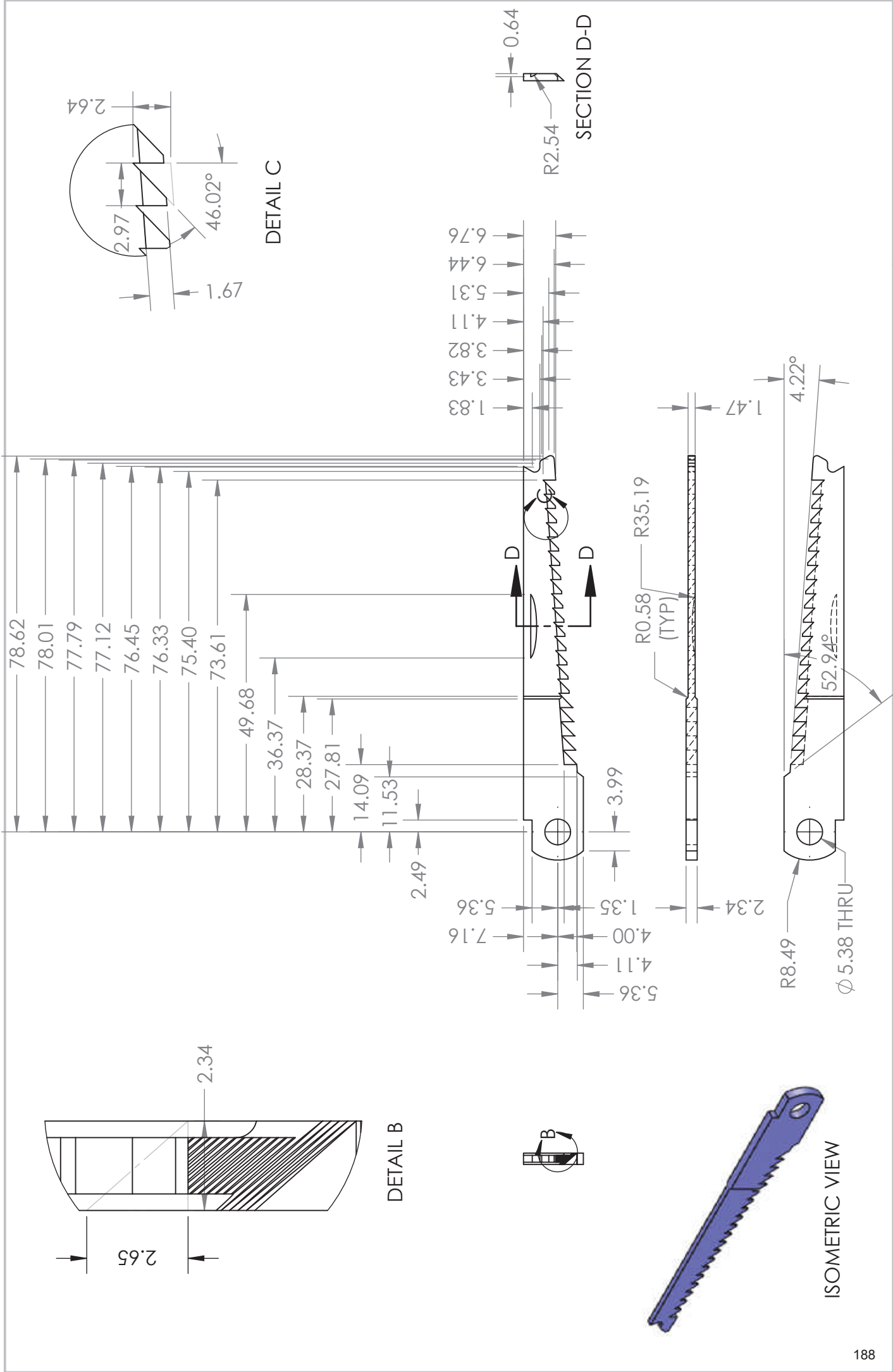
1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

 ISOMETRIC VIEW 	 ISOMETRIC VIEW 	 ISOMETRIC VIEW 	DESCRIPTION. Plier Pin,Rubber 1 & 2 SHEET 1 OF 1 ANGLE OF PROJECTION ISOMETRIC VIEW ALL DIMENSIONS ARE IN MM
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DESCRIPTION.

SAW

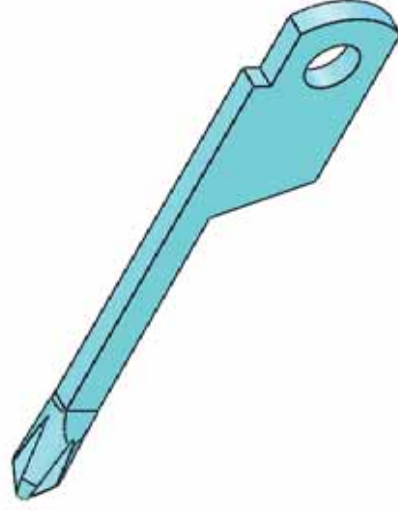
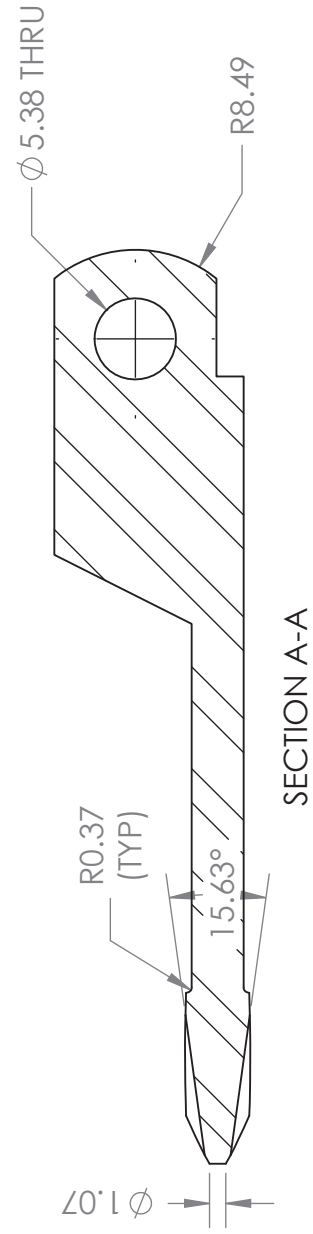
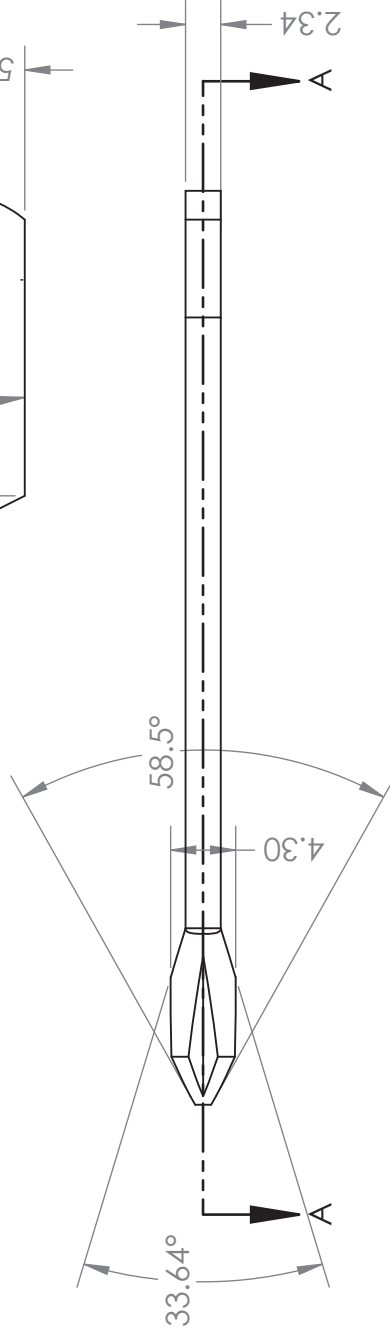
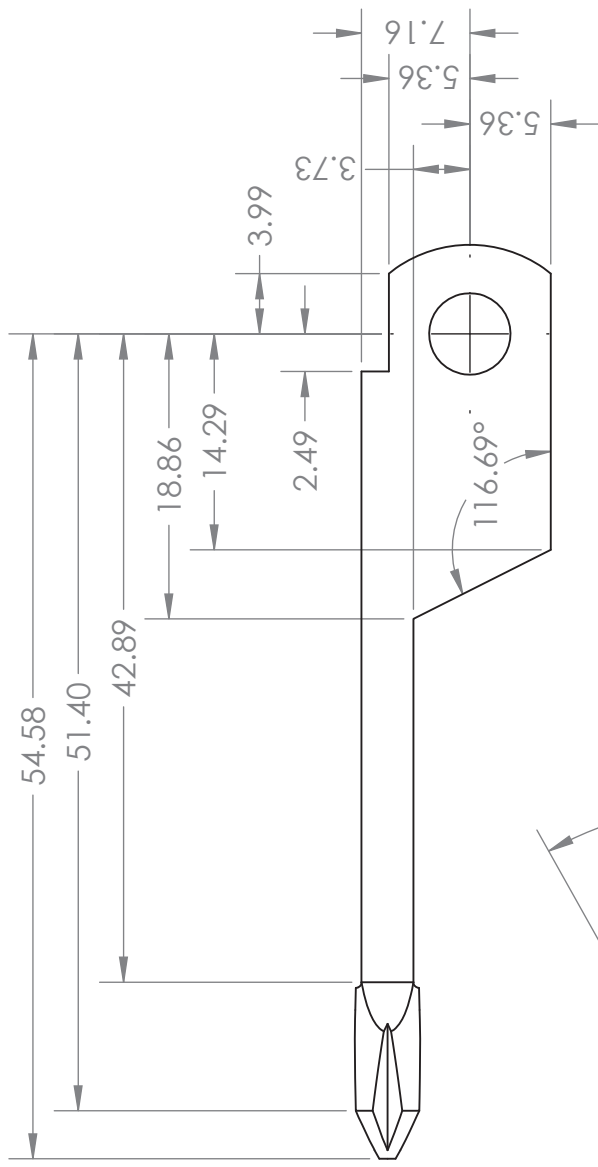
SHEET

1 OF 1

ANGLE OF PROJECTION

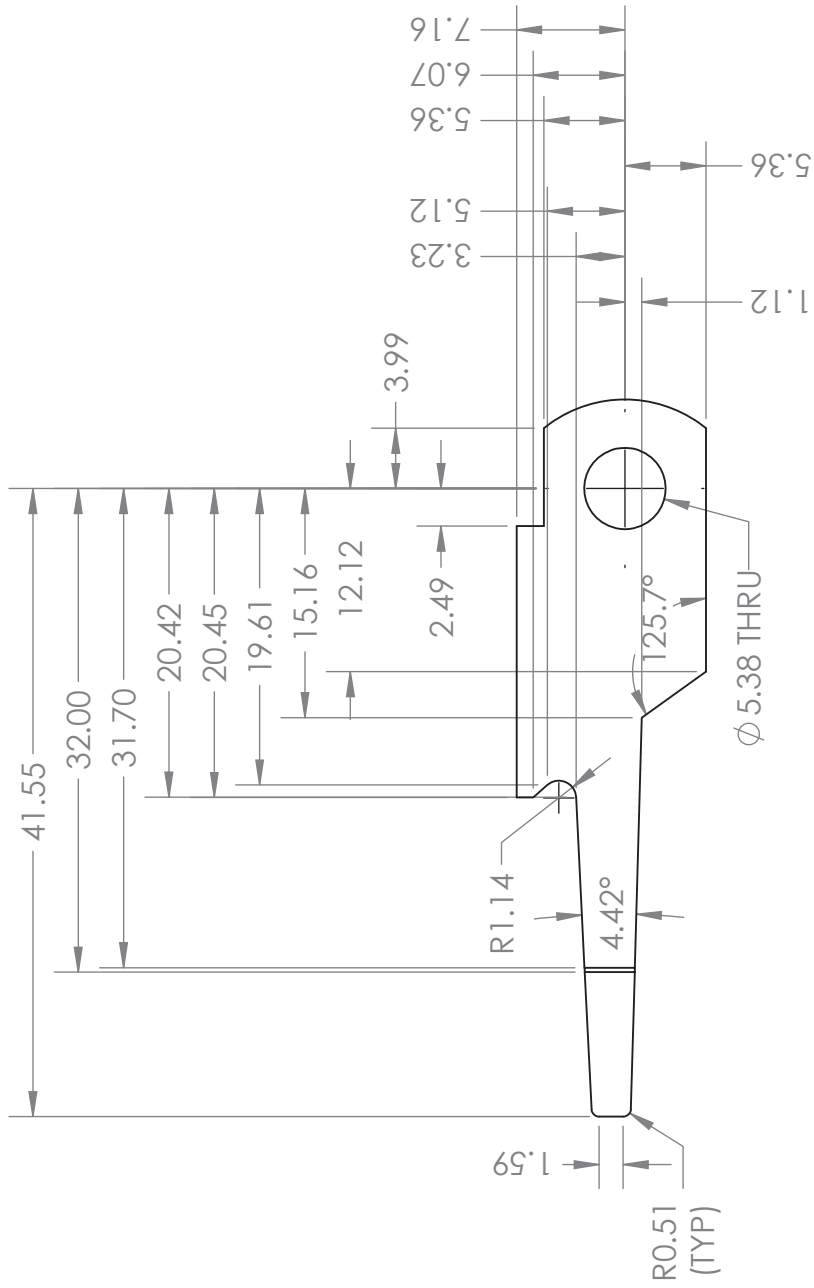


ALL DIMENSIONS ARE IN MM

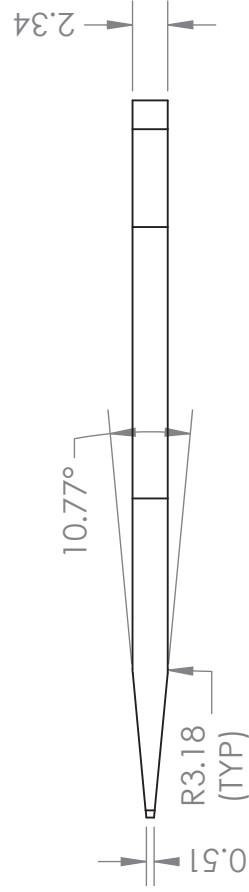


ISOMETRIC VIEW

DESCRIPTION.	SC. DR.	SHEET 1 OF 1	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



DESCRIPTION. SMALL FLAT SC. DR

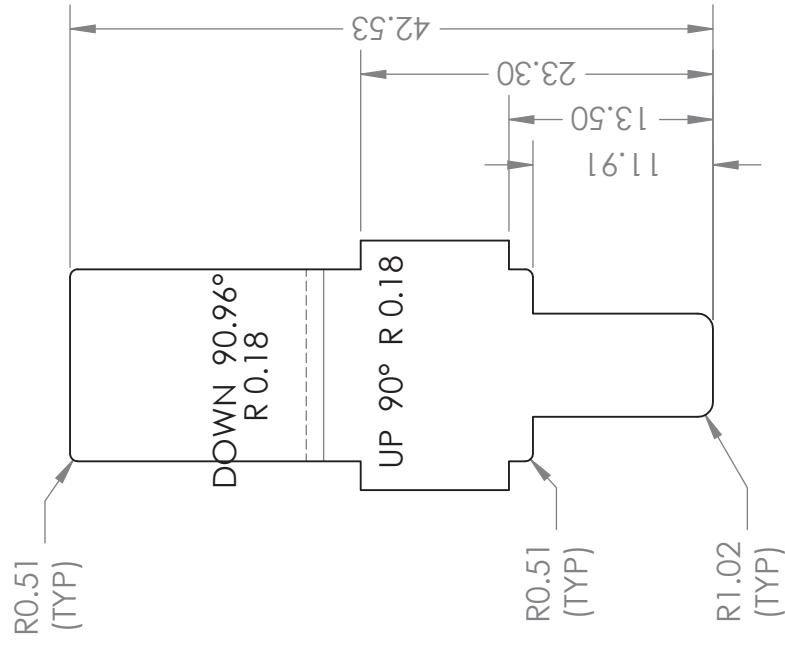
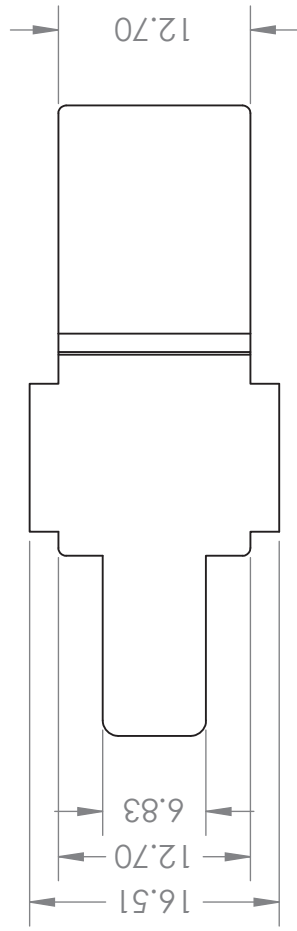
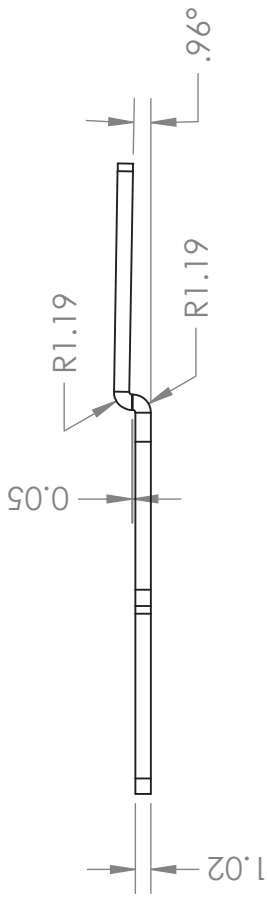
SHEET

1 OF 1

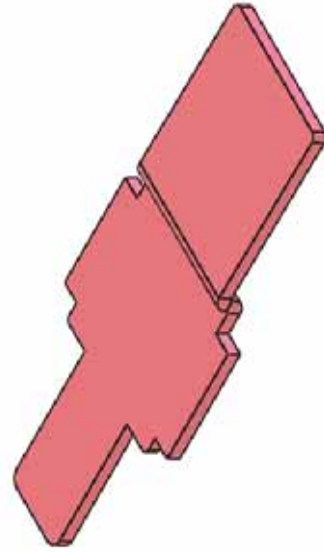
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



FLAT PATTERN VIEW



ISOMETRIC VIEW

DESCRIPTION.

Spring Sheet

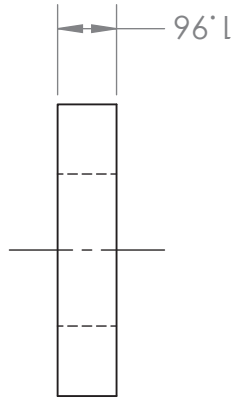
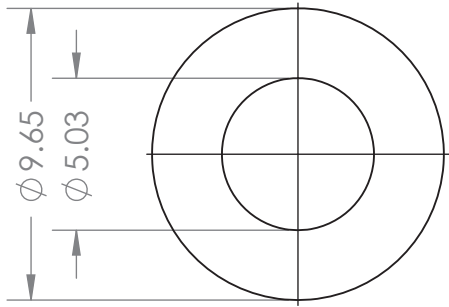
SHEET

1 OF 1

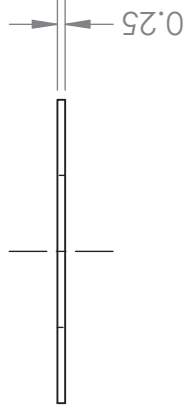
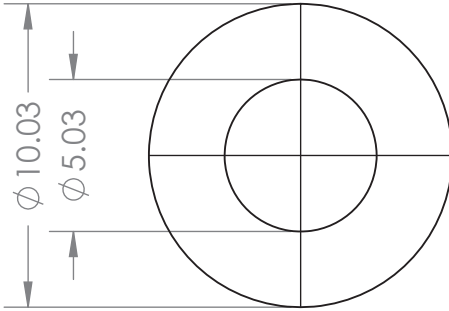
ANGLE OF PROJECTION



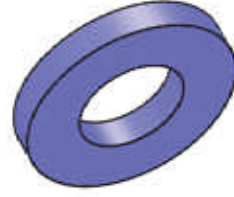
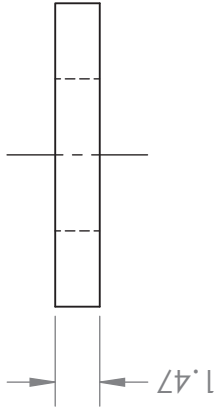
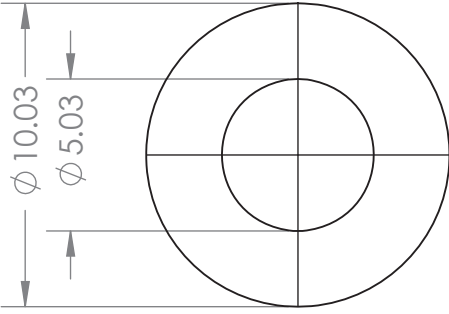
ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Washer 1 ,2 & 3

SHEET

1 OF 1

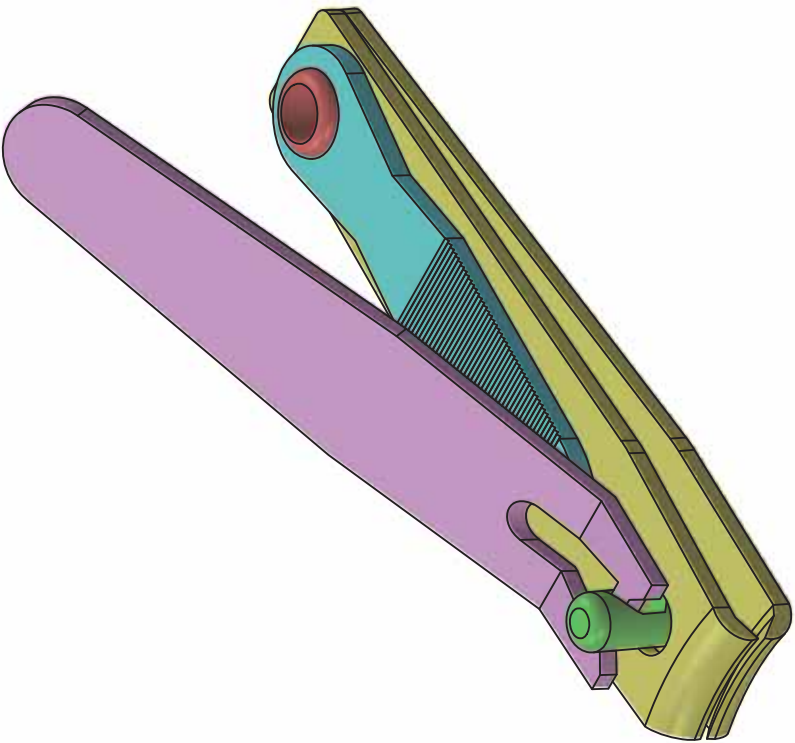
ANGLE OF PROJECTION



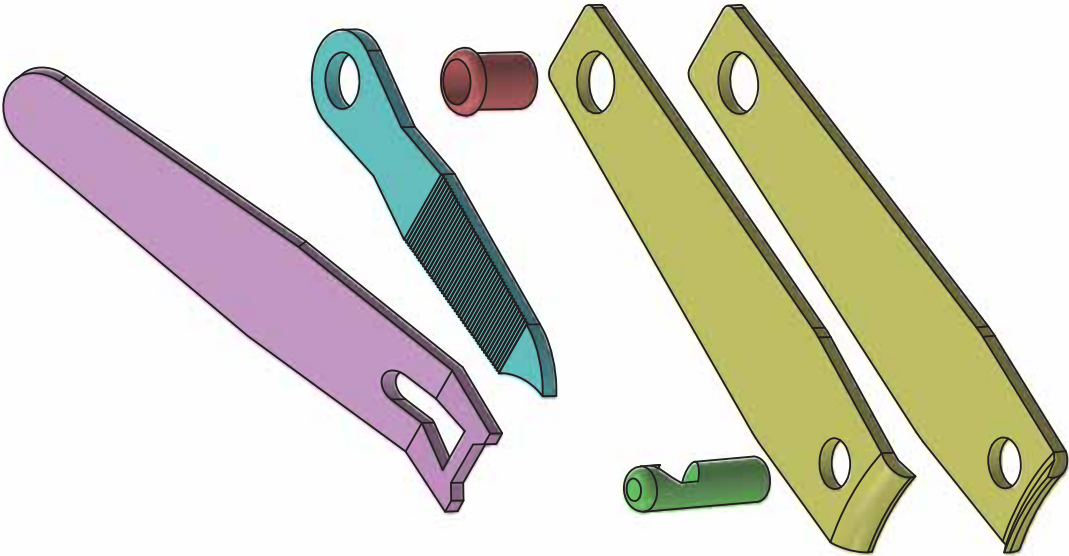
ALL DIMENSIONS ARE IN MM

NAIL CUTTER





ASSEMBLED VIEW



EXPLODED VIEW

DESCRIPTION. Nail_cutter__EXPLODED

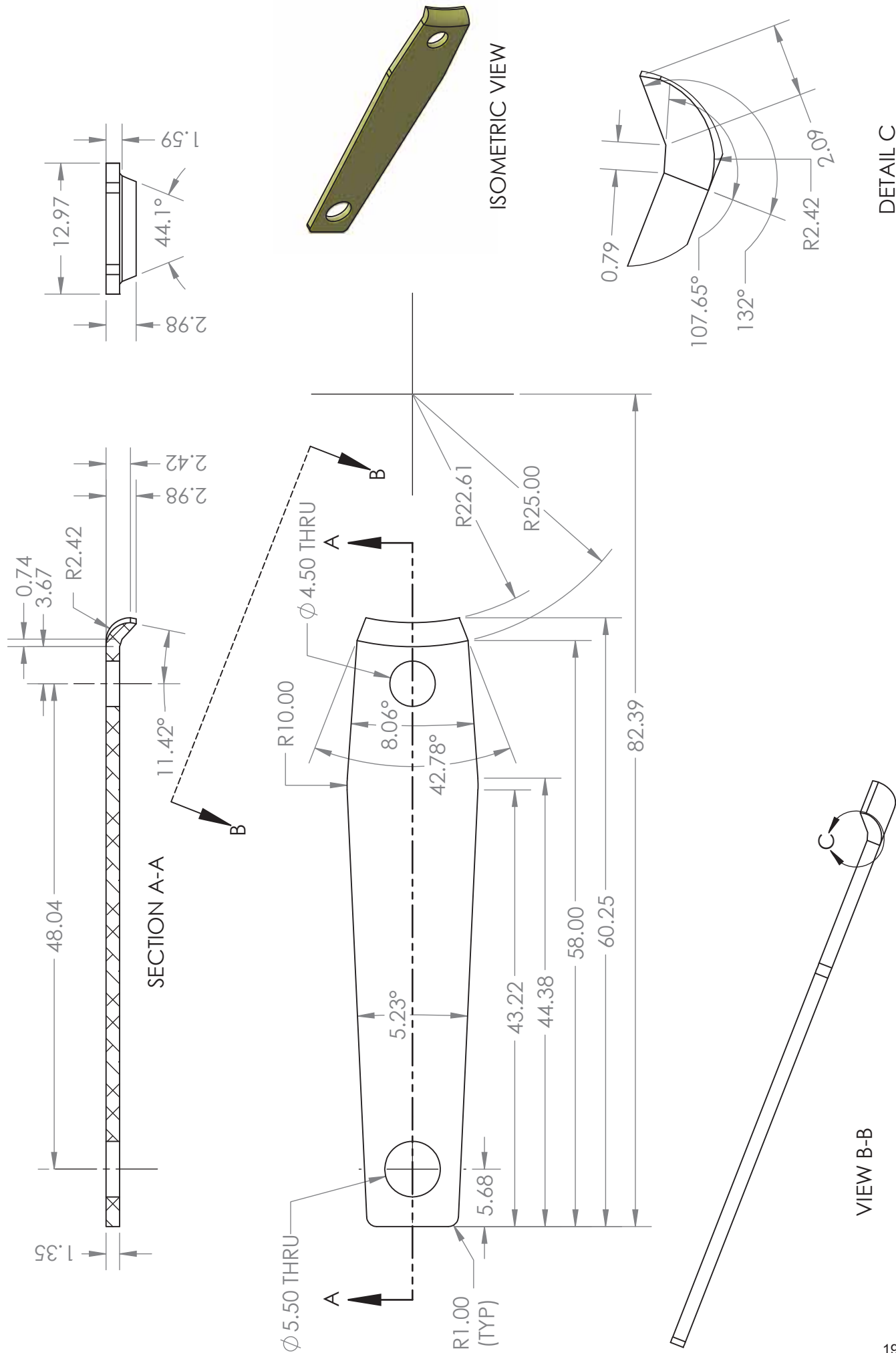
SHEET

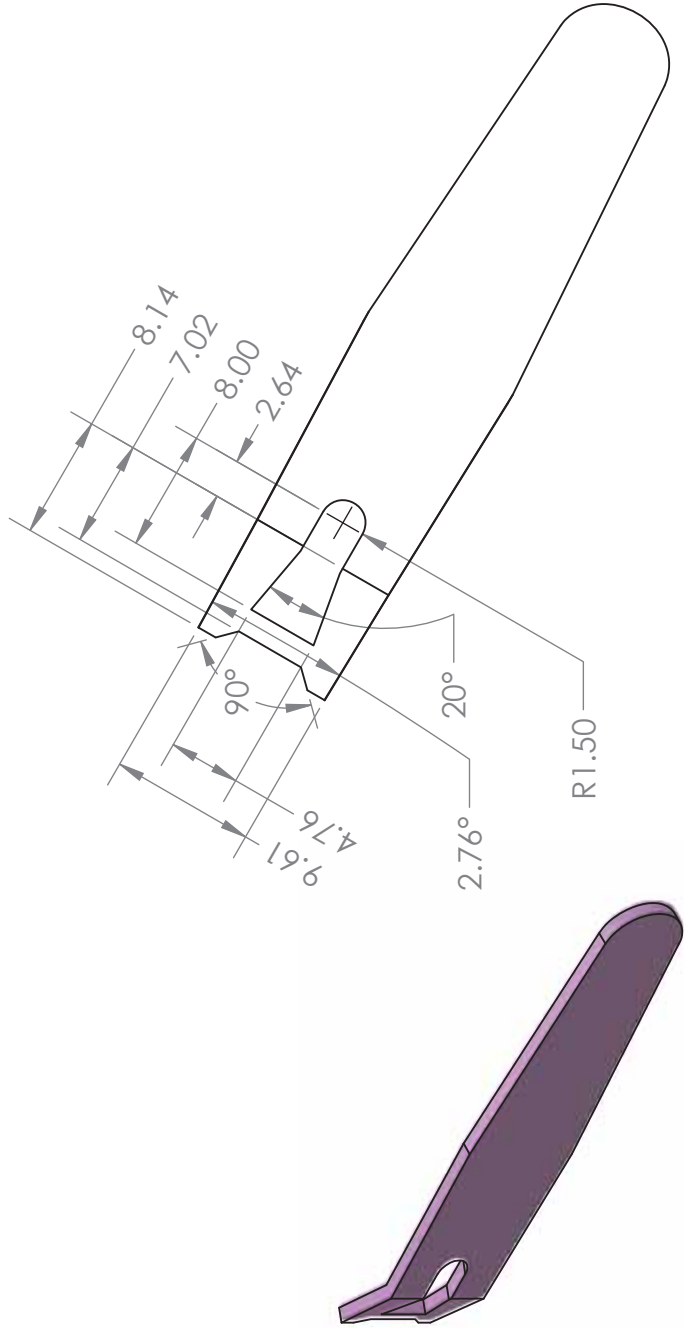
1 OF 1

ANGLE OF PROJECTION



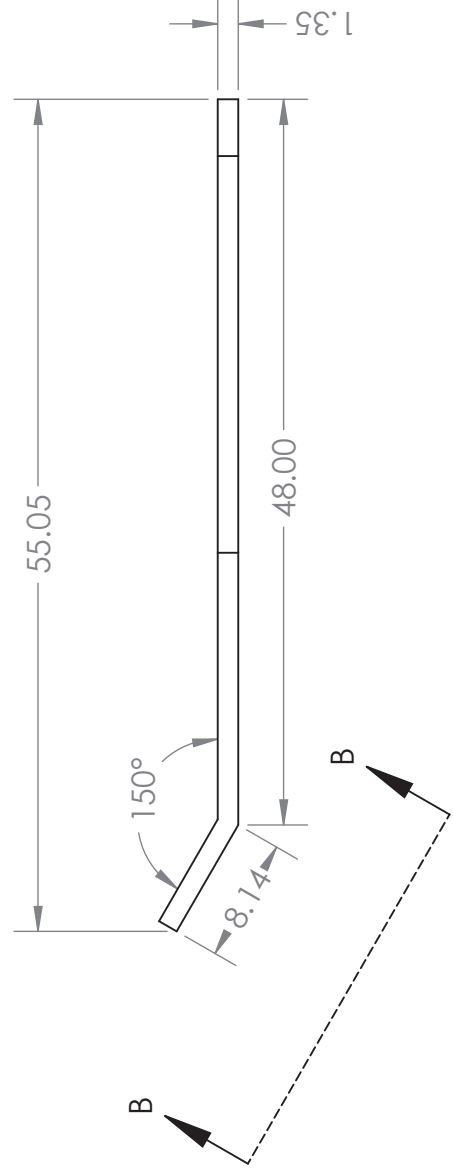
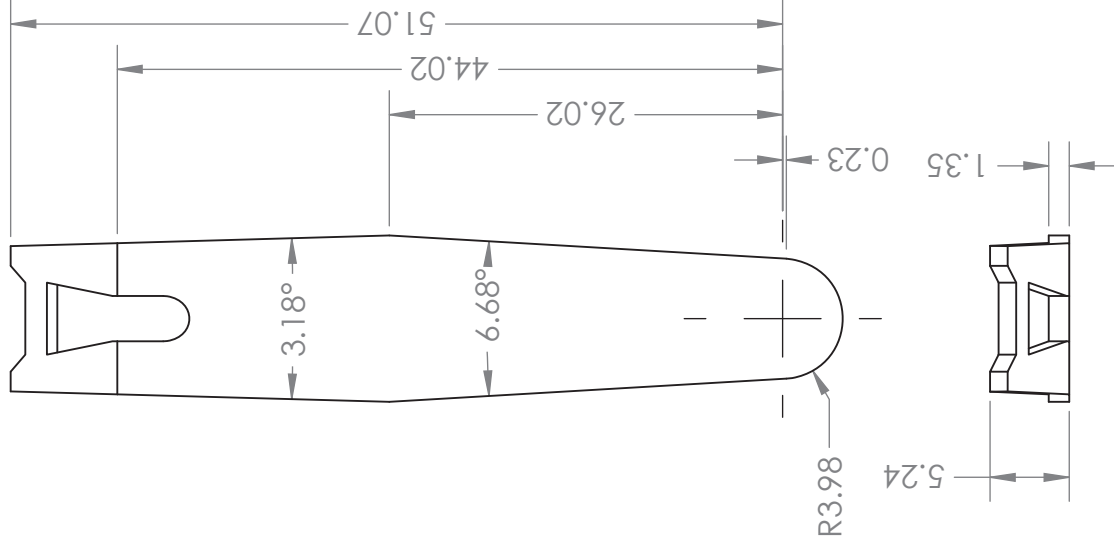
ALL DIMENSIONS ARE IN MM





ISOMETRIC VIEW

VIEW B-B



DESCRIPTION. Cutting Lever

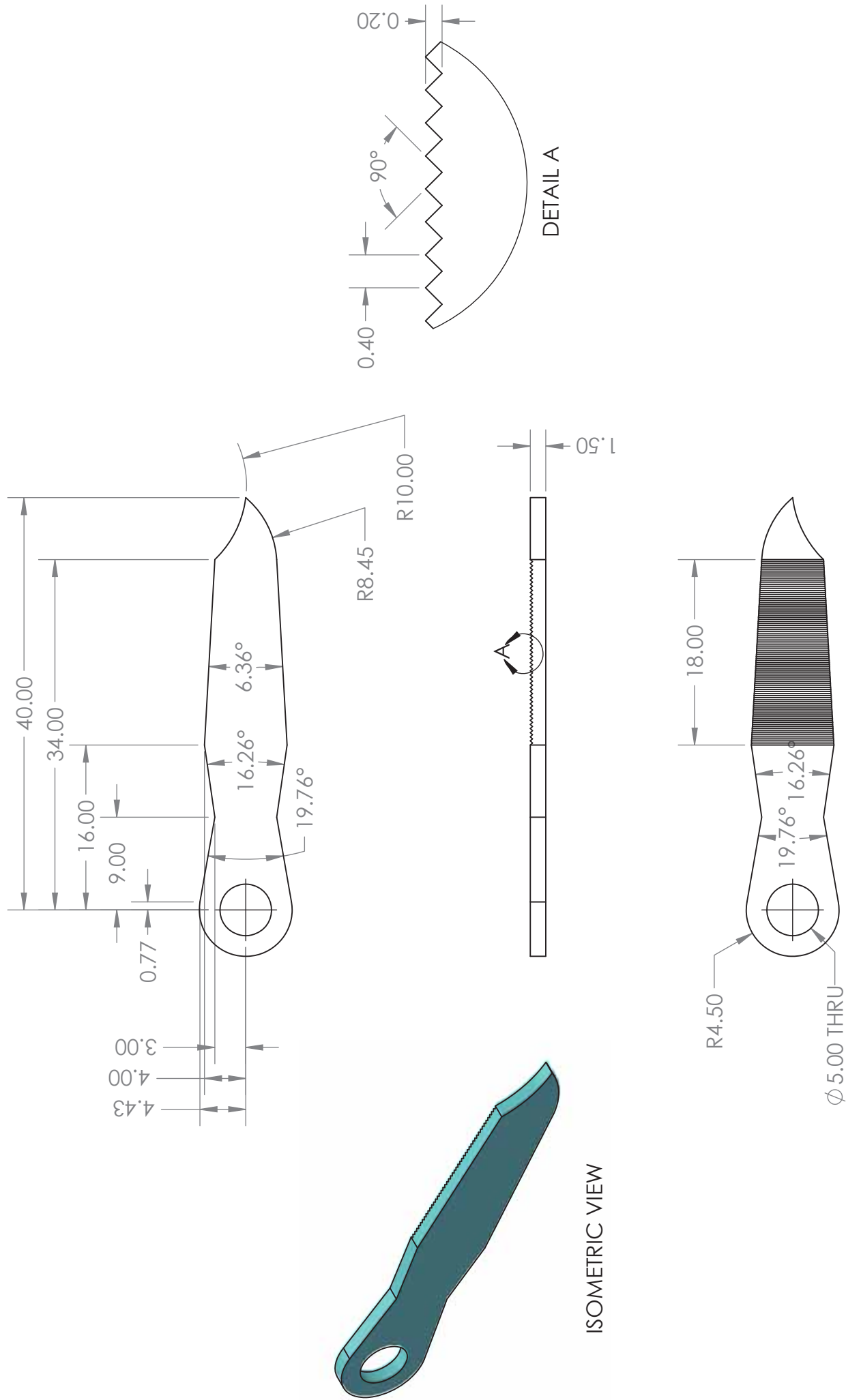
SHEET

2 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION.

Nail File

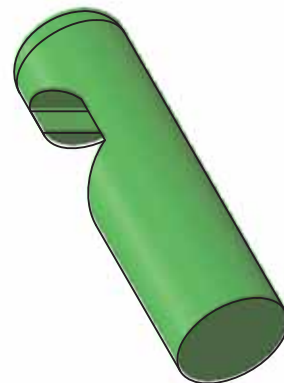
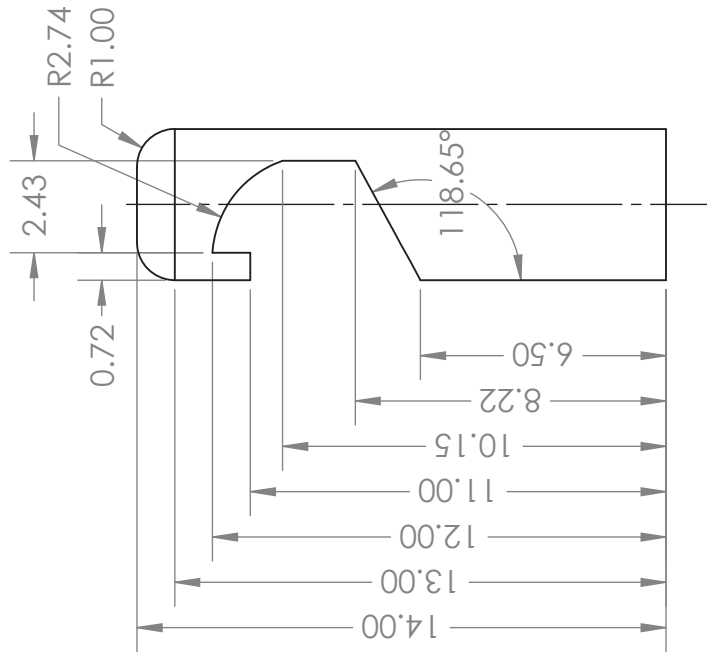
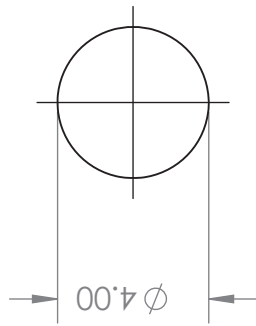
SHEET

3 OF 4

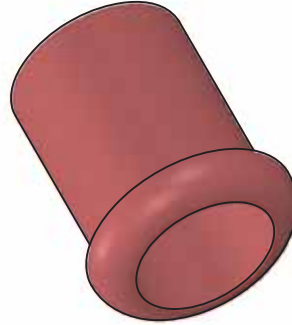
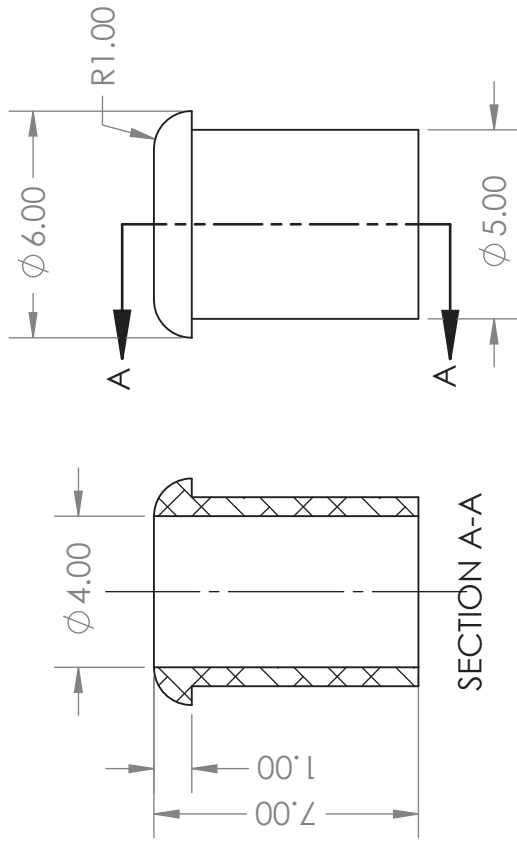
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Pin & Rivet

SHEET

4 OF 4

ANGLE OF PROJECTION



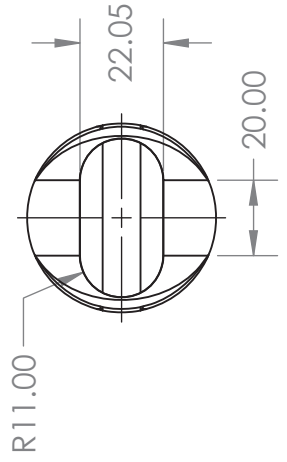
ALL DIMENSIONS ARE IN MM

OVAL PUNCH



6 5 4 3 2 1

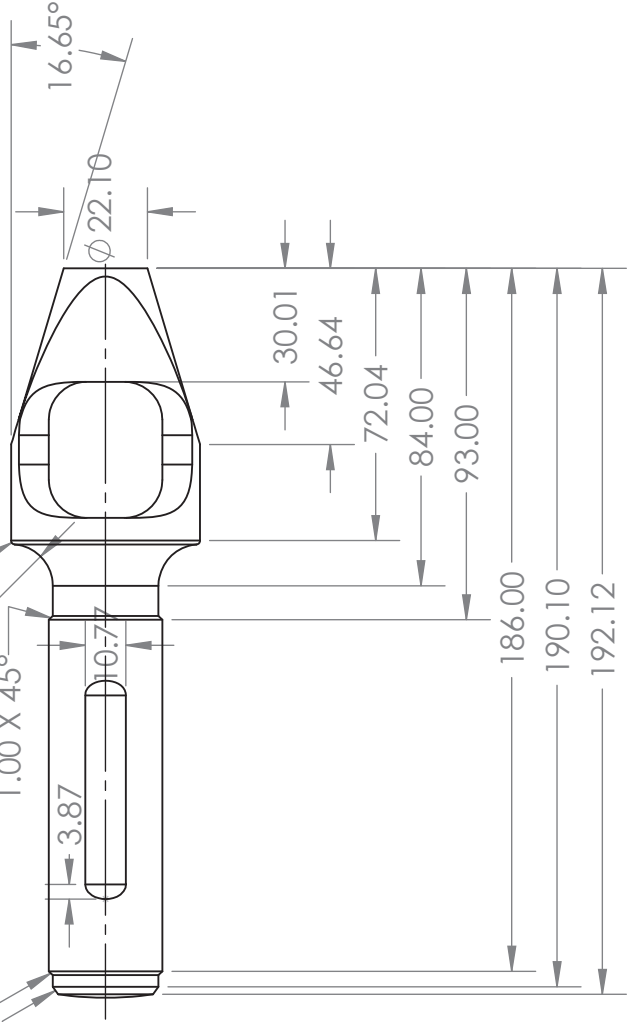
D



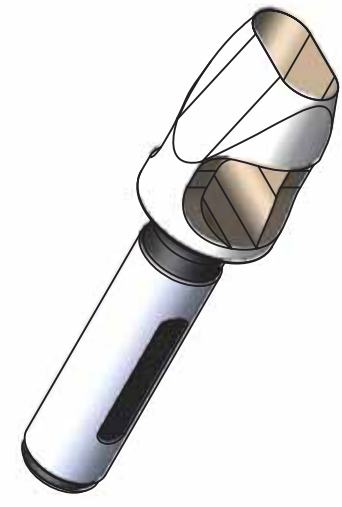
1.00 X 45°
2.02 X 36.05°

R1.00
R11.00

1.00 X 45°

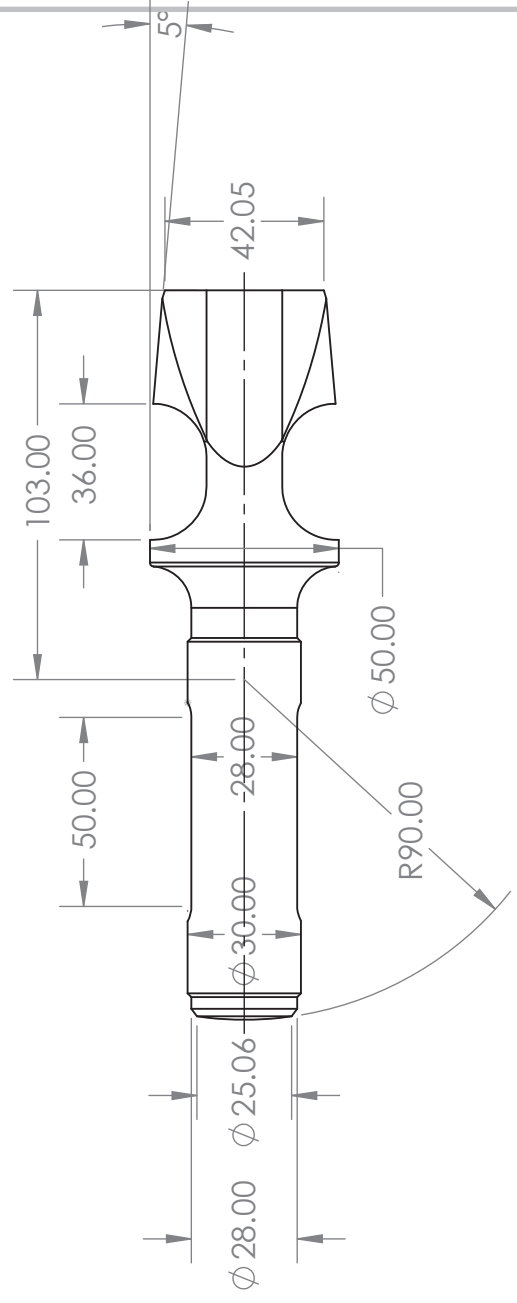


C



ISOMETRIC VIEW

B



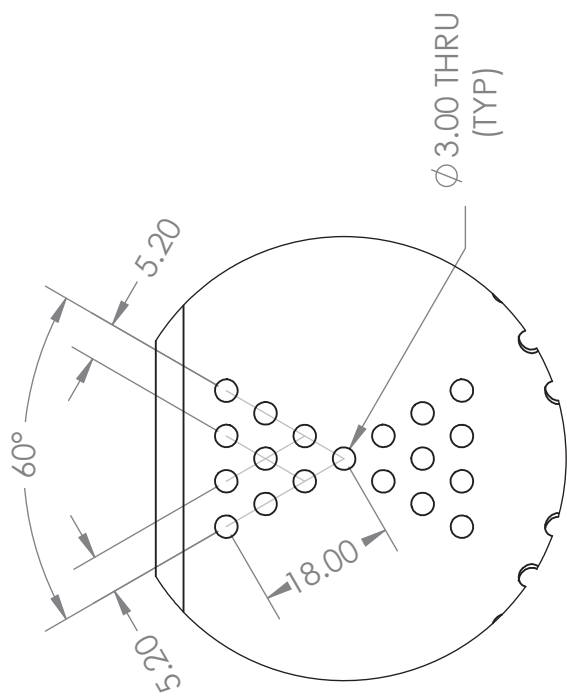
A

DESCRIPTION.	Oval Punch	SHEET 1 OF 1	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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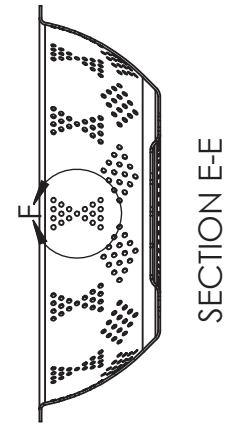
6 5 4 3 2 1

PASTA STAINER

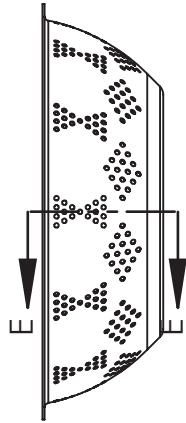




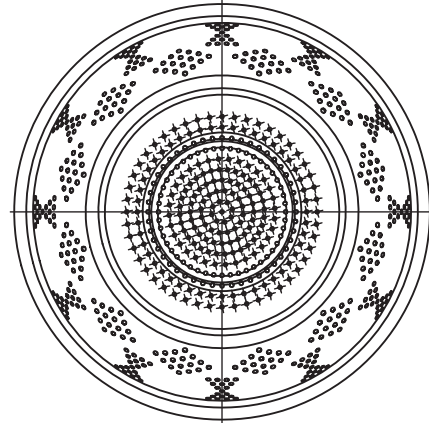
DETAIL F



SECTION E-E



ISOMETRIC VIEW



DESCRIPTION.

Strainer

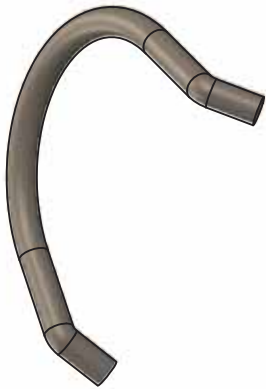
SHEET

2 OF 4

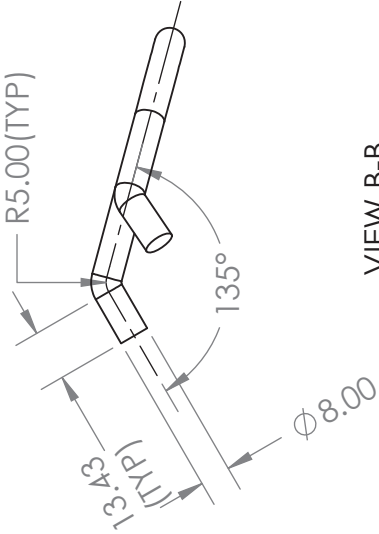
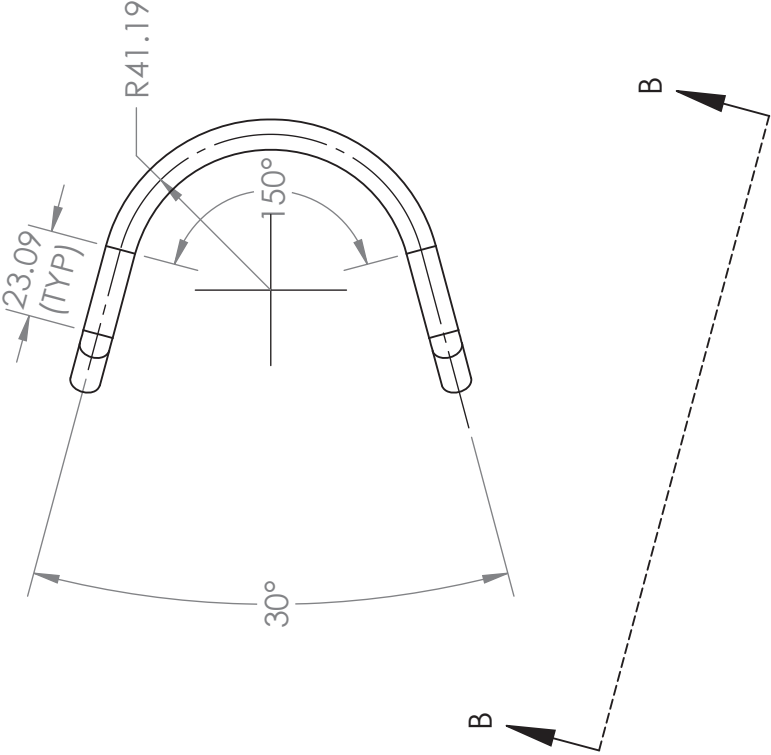
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



VIEW B-B

DESCRIPTION.

Handle

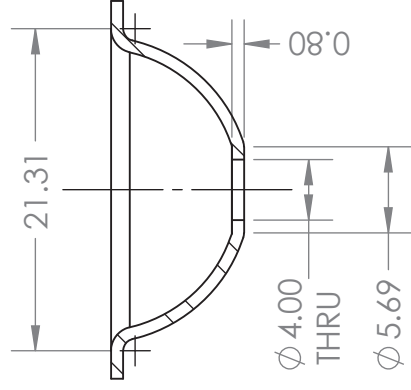
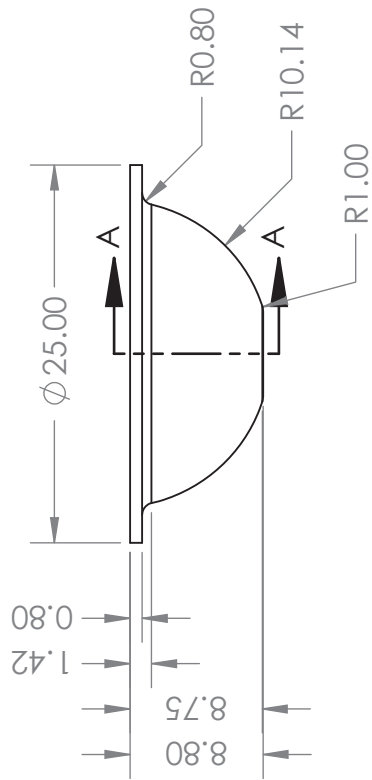
SHEET

3 OF 4

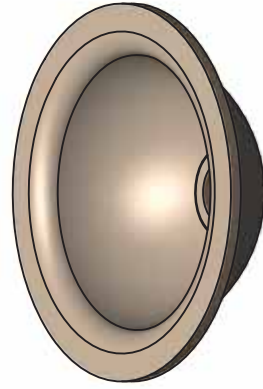
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



SECTION A-A



ISOMETRIC VIEW

DESCRIPTION. Resting Buttons

SHEET

4 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

PIPE BENDER



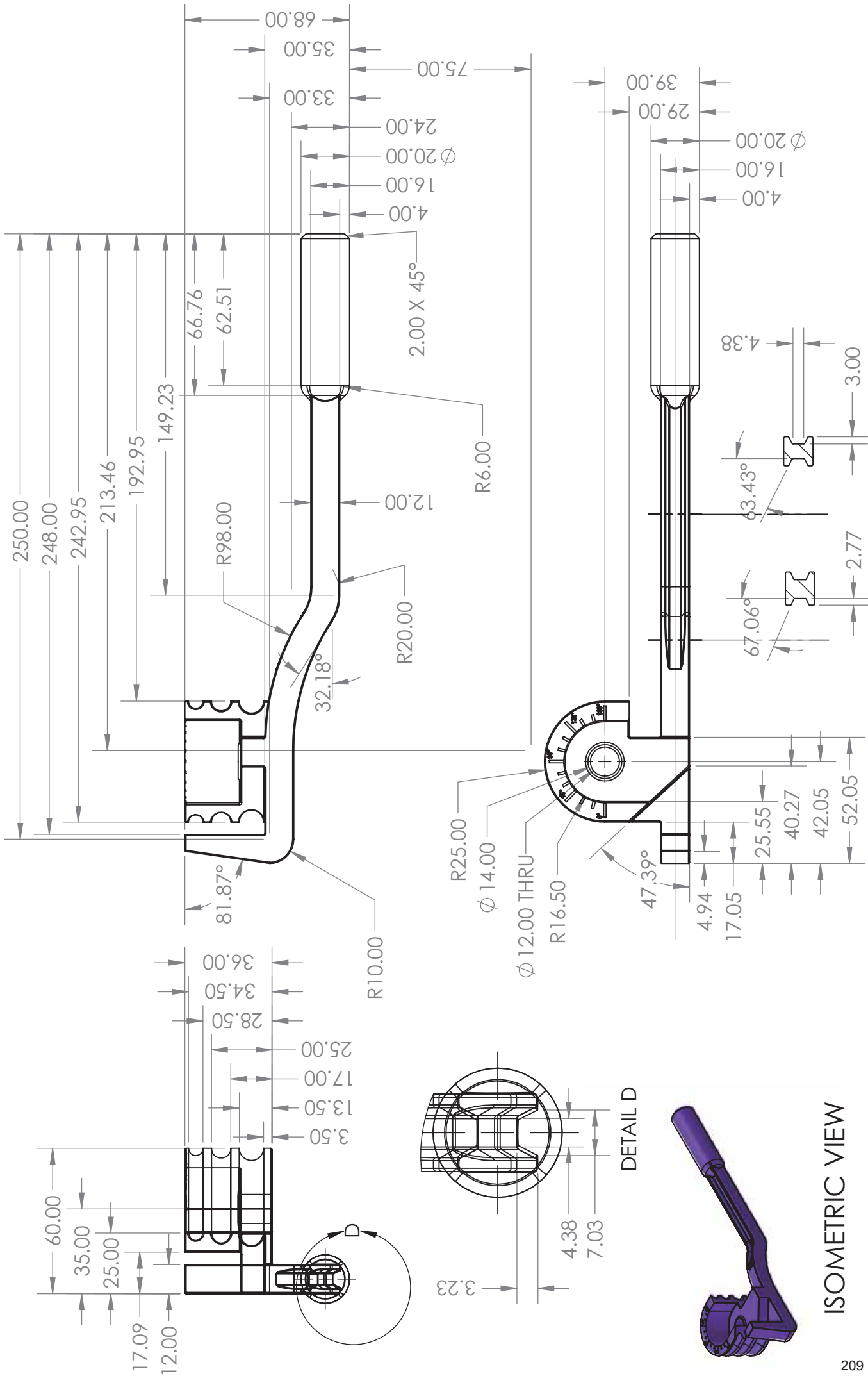
An exploded view of a mechanical assembly. It features a red handle on the left and a purple handle on the right. In the center is a purple gear mechanism with a green connecting link. Two yellow pins are shown below the gear mechanism. A curved arrow indicates the rotation of the gear mechanism.

EXPLODED VIEW

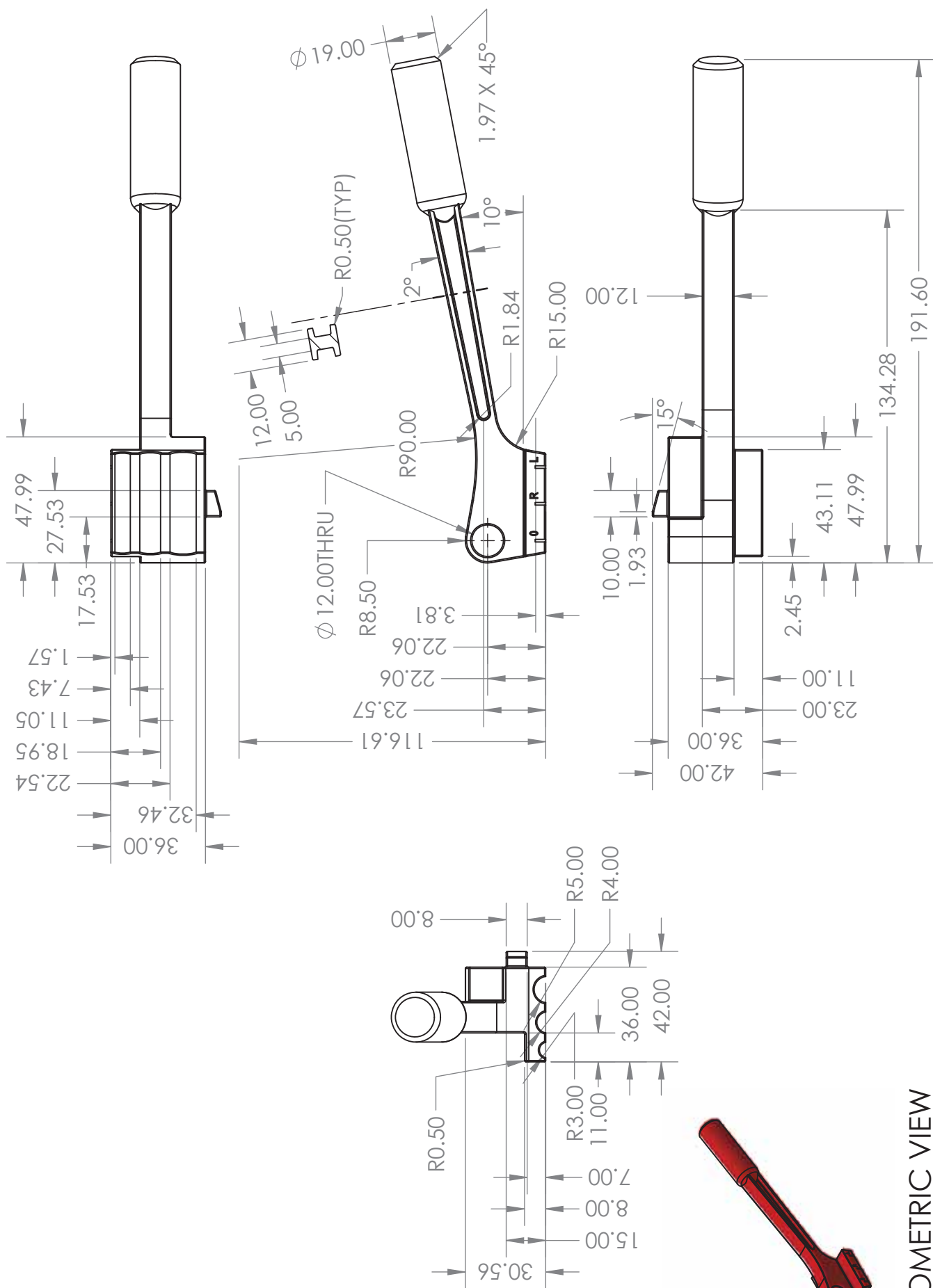
An isometric view of the same mechanical assembly. The red handle is on the left, the purple handle is on the right, and the purple gear mechanism with the green connecting link is in the center. Two yellow pins are positioned at the base of the gear mechanism.

ISOMETRIC VIEW

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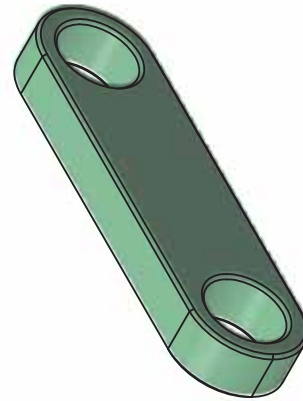
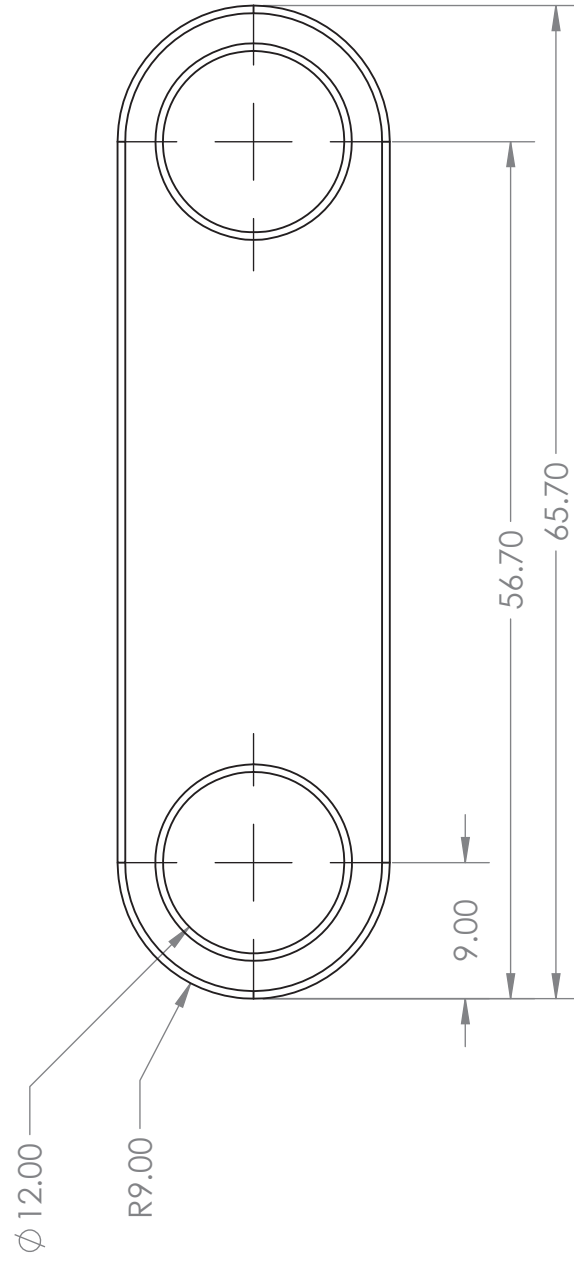
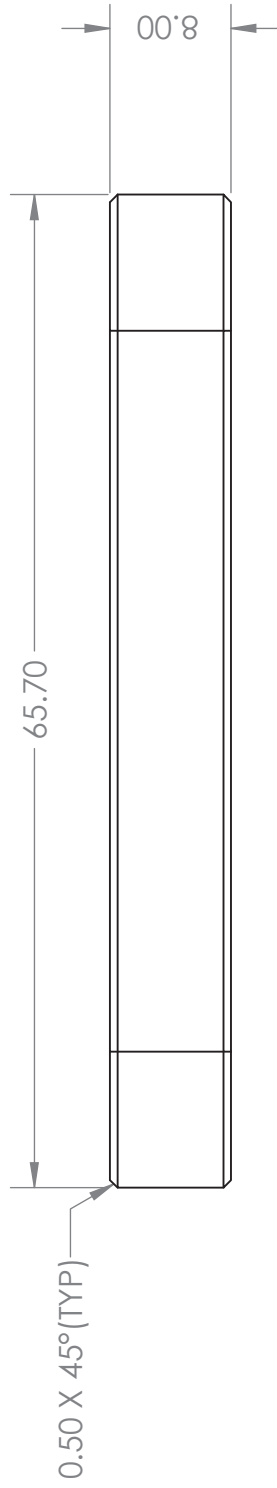


DESCRIPTION.	Main Frame	SHEET 1 OF 6	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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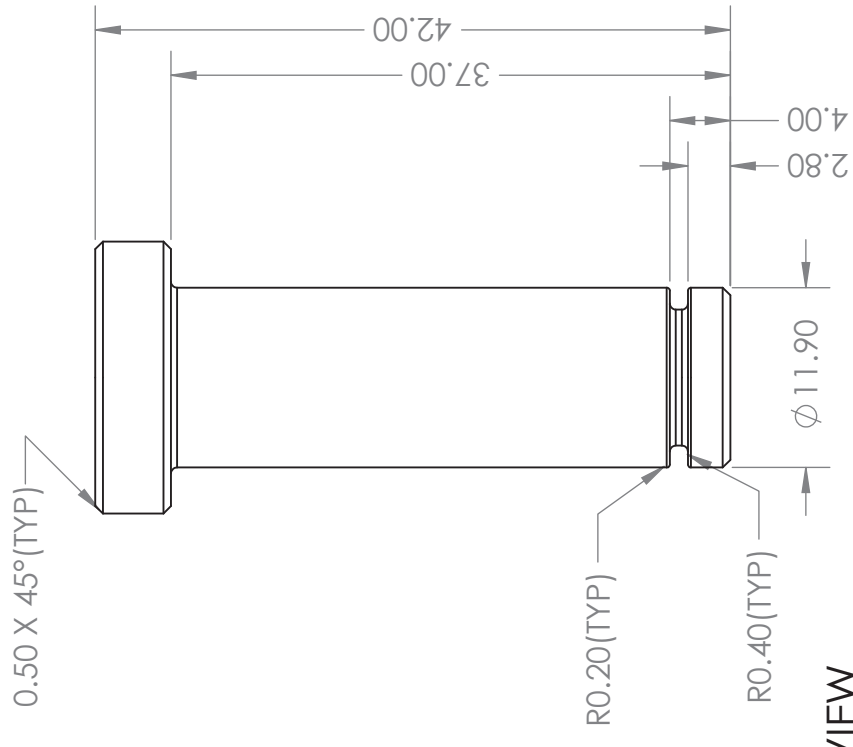
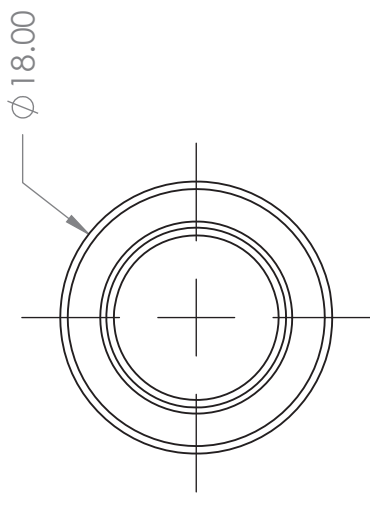
ISOMETRIC VIEW

DESCRIPTION. Bending Handle	SHEET 2 OF 6	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

DESCRIPTION.	Link	SHEET 3 OF 6	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



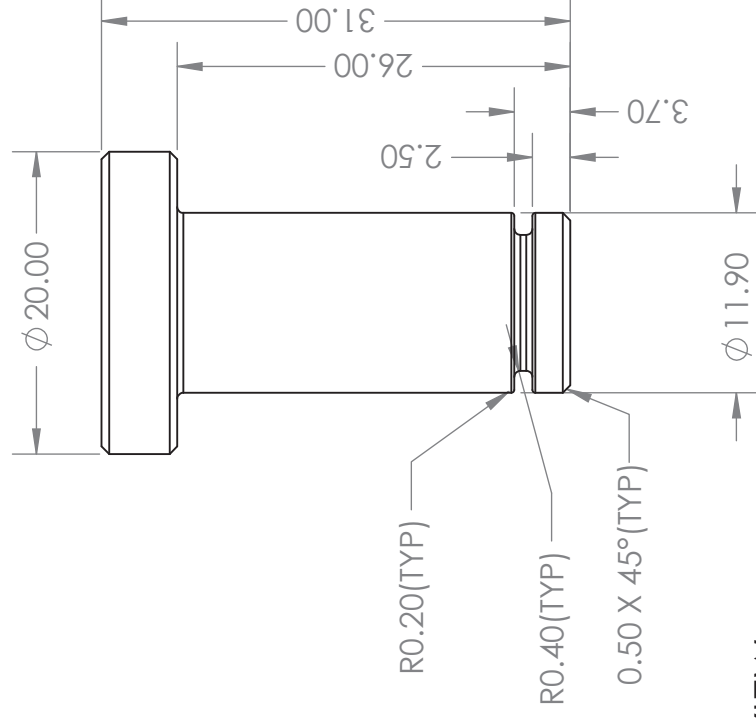
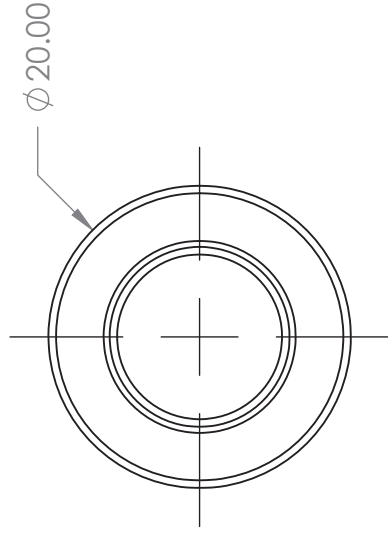
ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

SHEET 4 OF 6

DESCRIPTION.

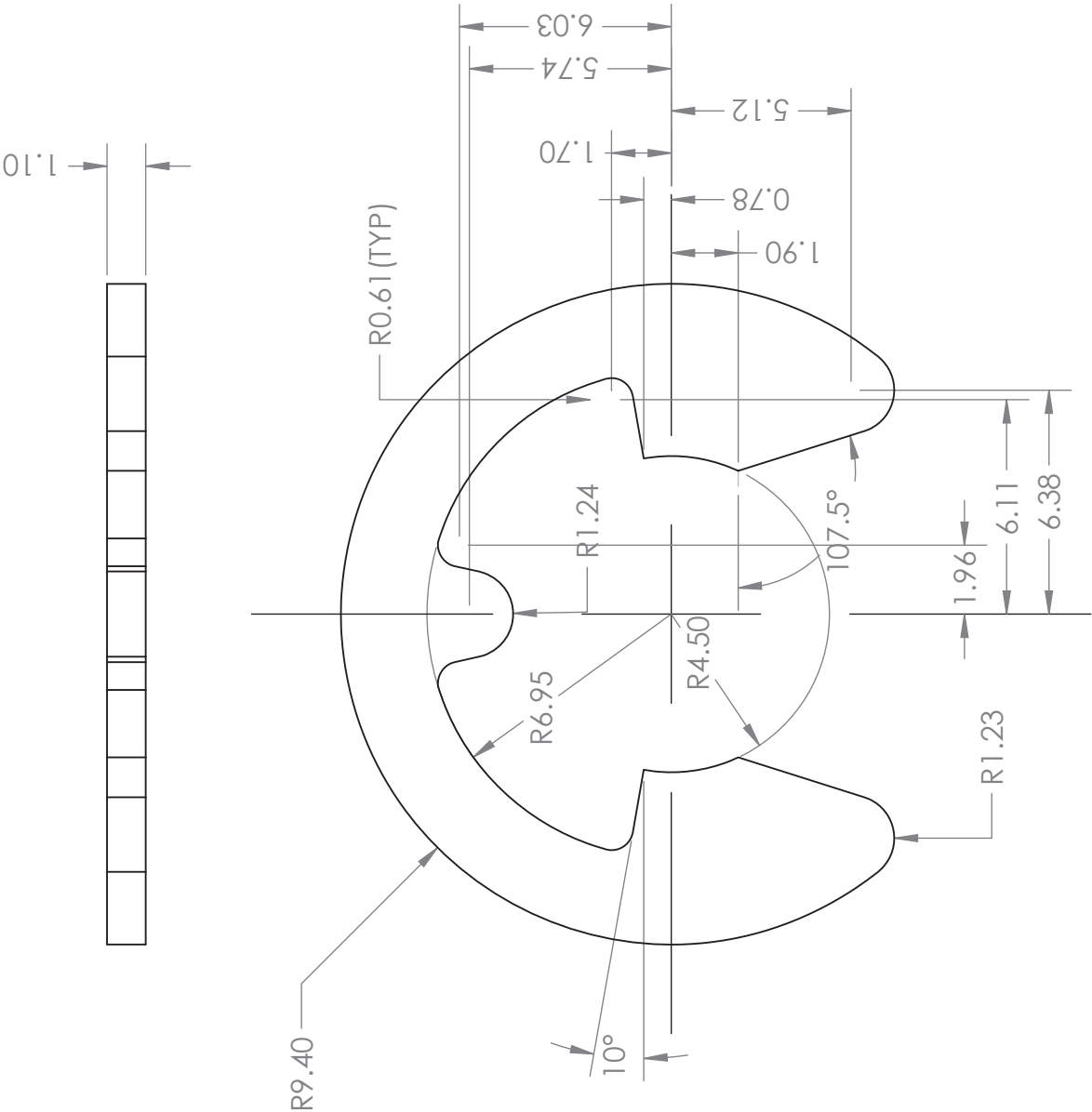


ISOMETRIC VIEW





ISOMETRIC VIEW



ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

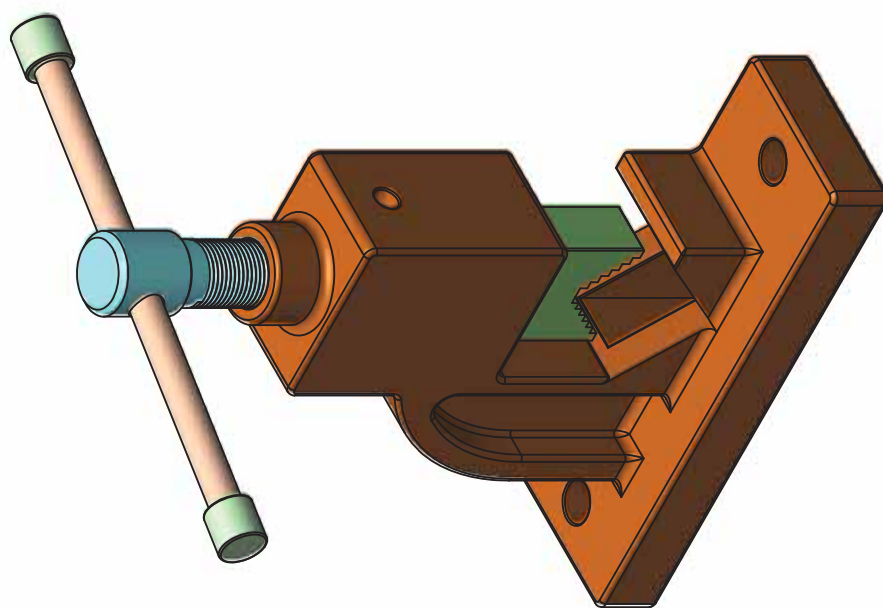
SHEET 6 OF 6

Clip

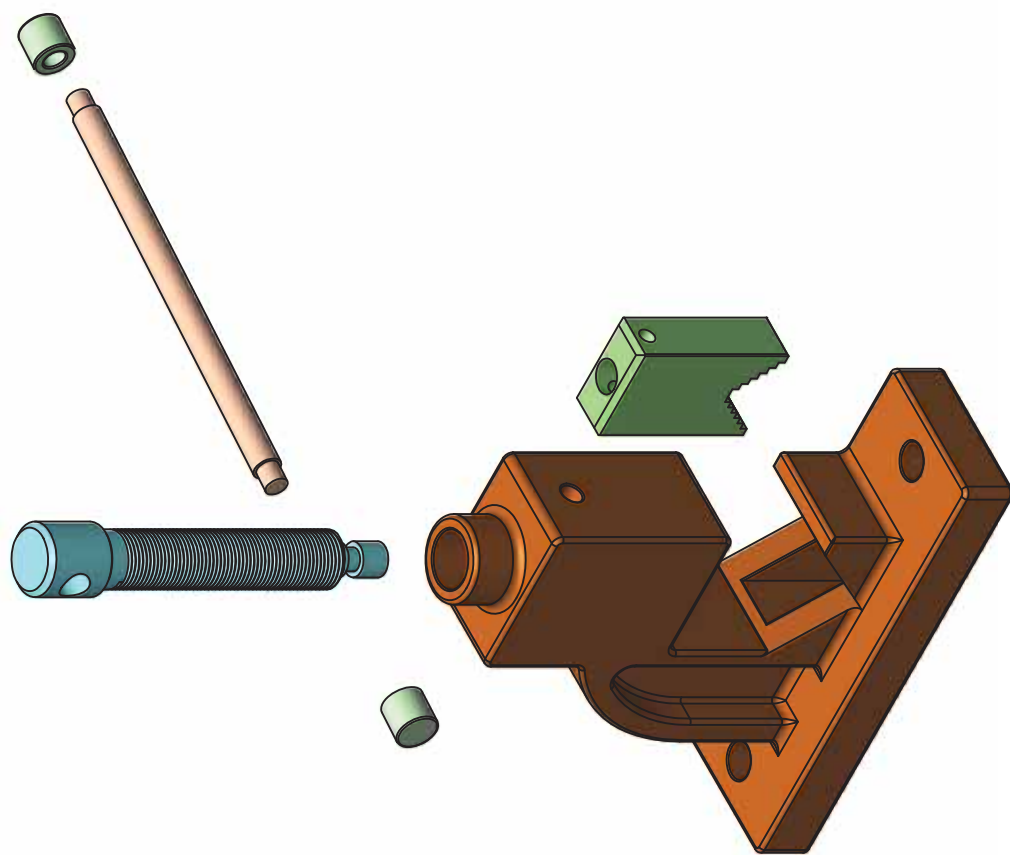
DESCRIPTION.

PIPE VICE





ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION. EXPLODED VIEW

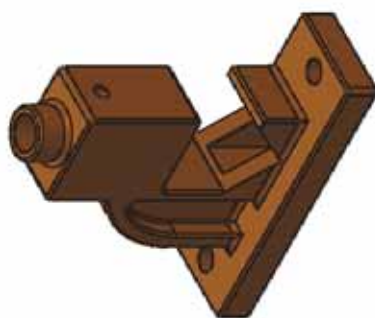
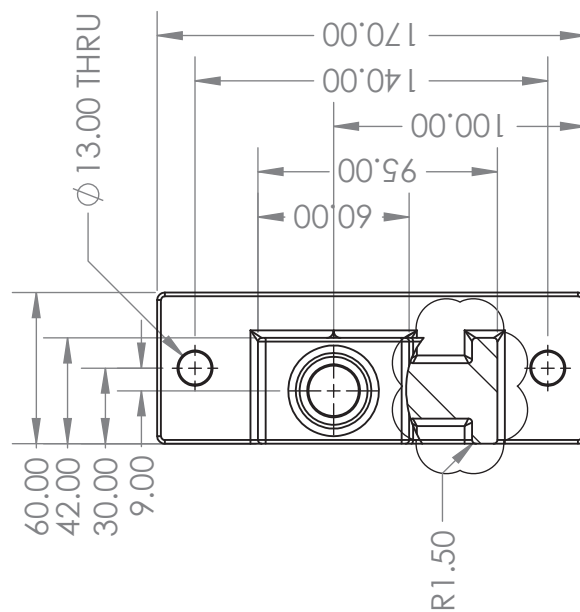
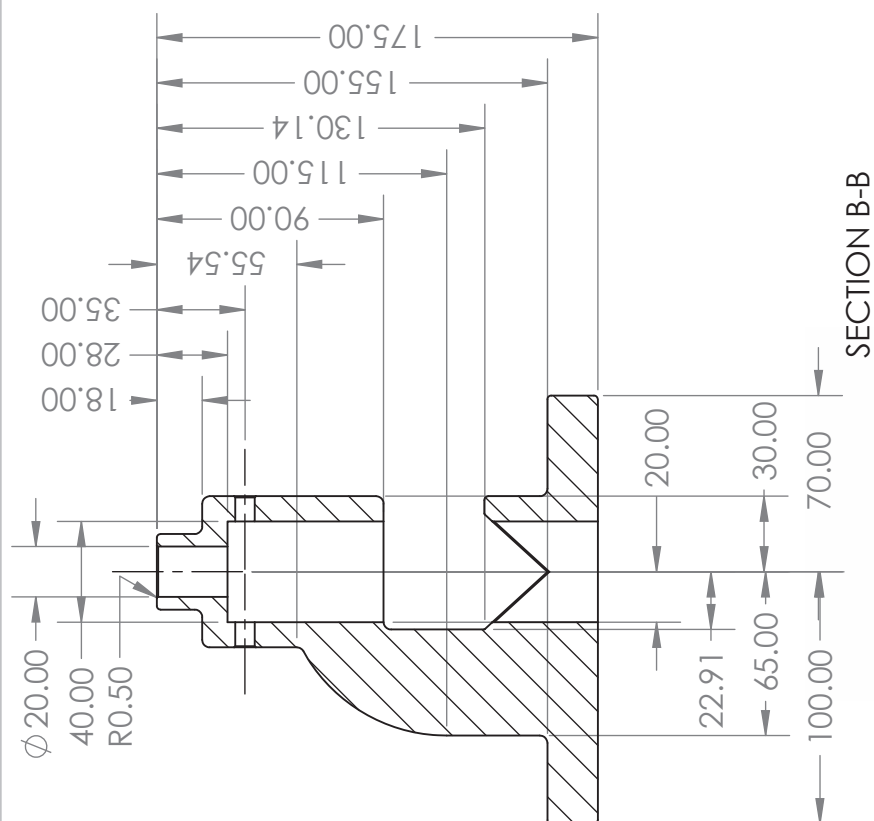
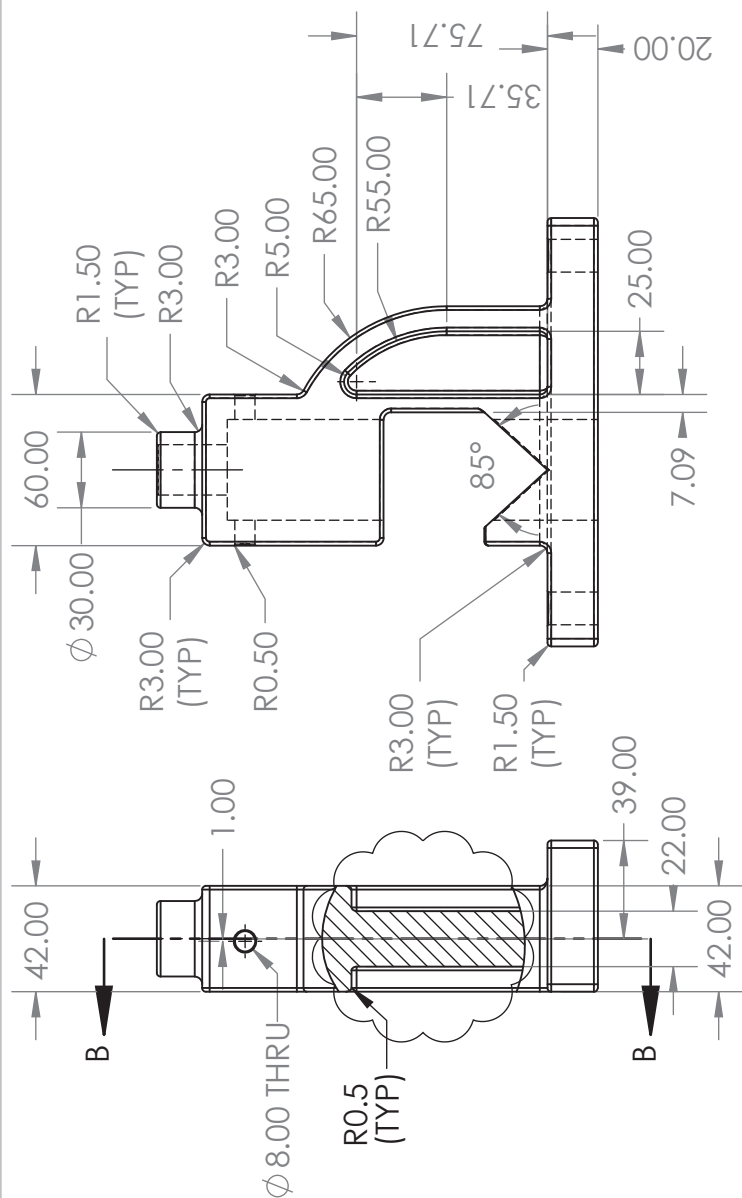
SHEET

1 OF 1

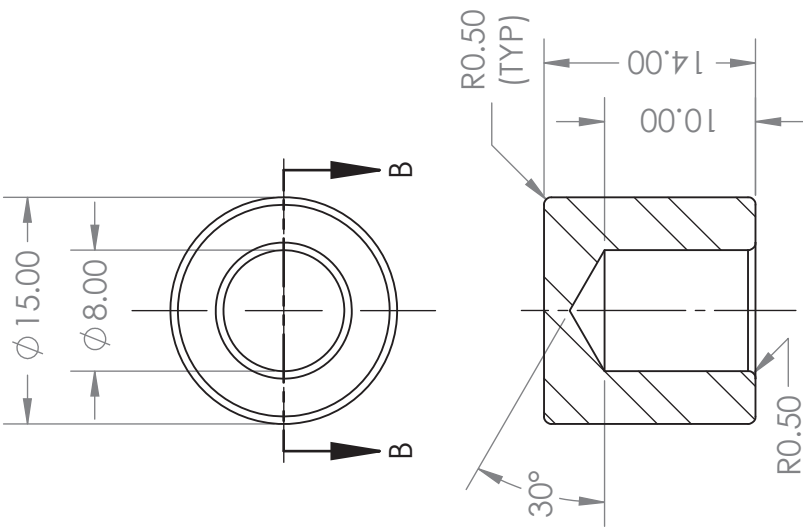
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



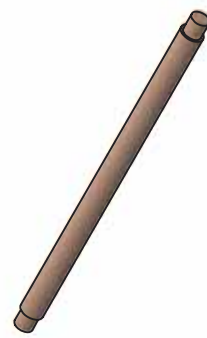
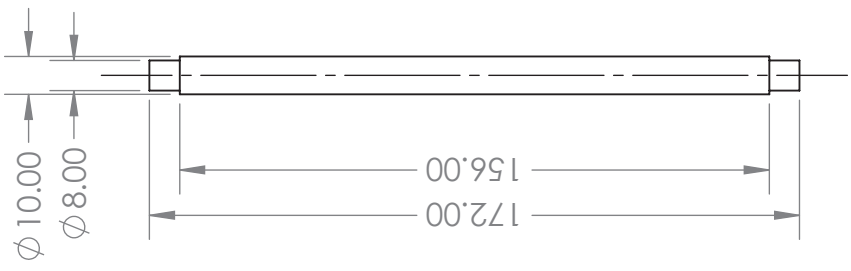
ISOMETRIC VIEW



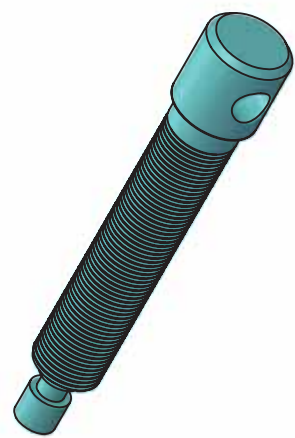
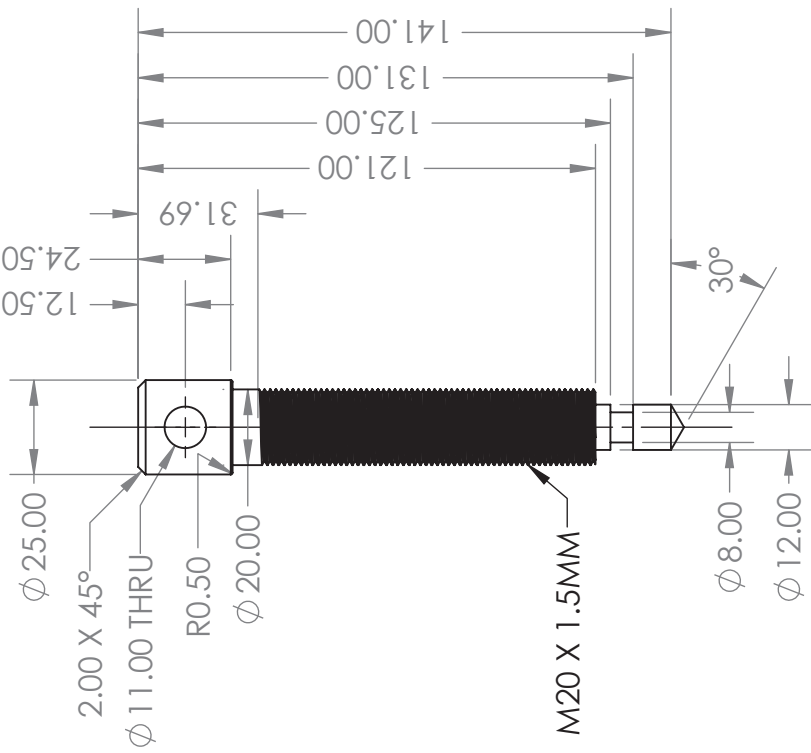
SECTION B-B



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Cap Handle & Screw Rod

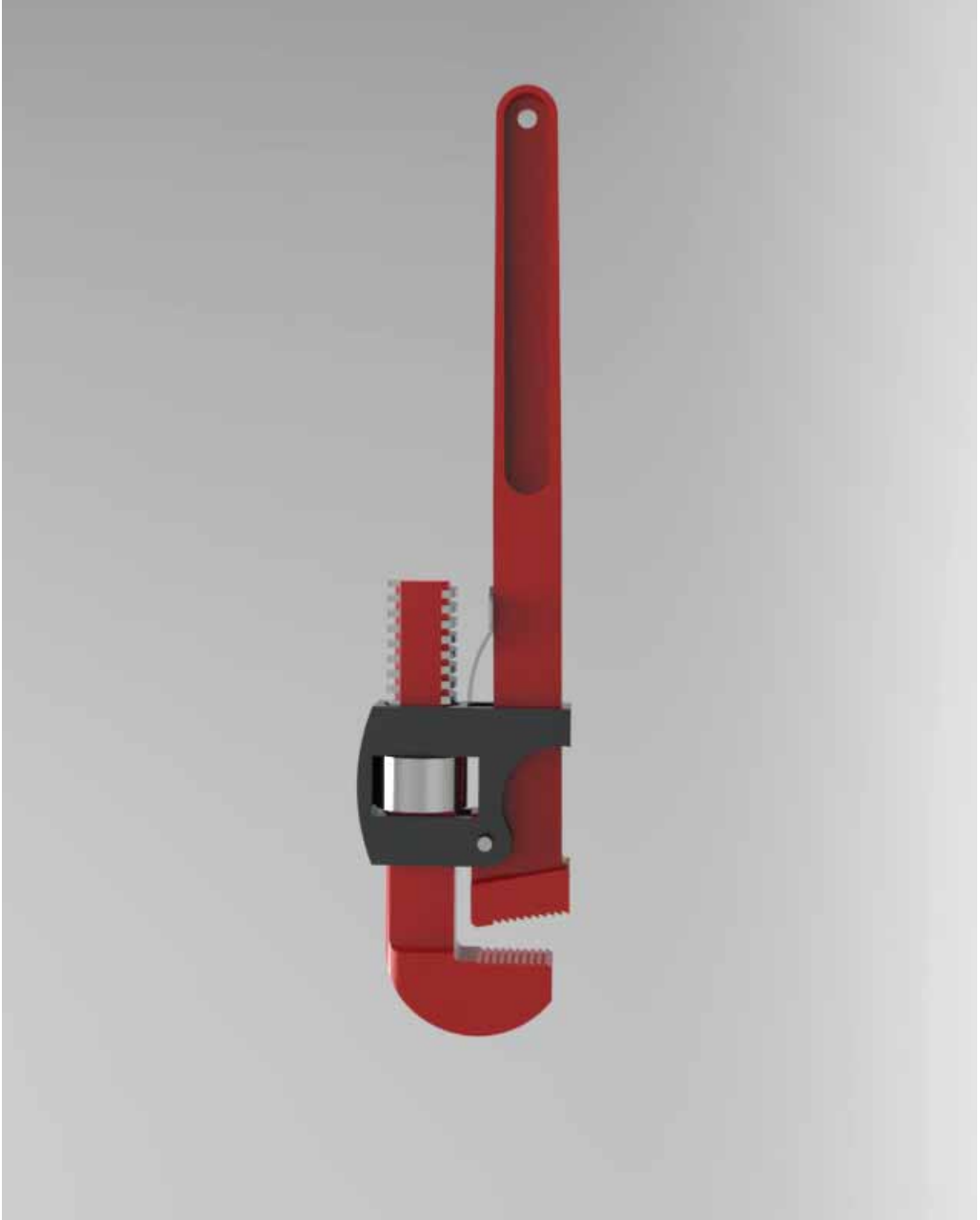
SHEET 1 OF 1

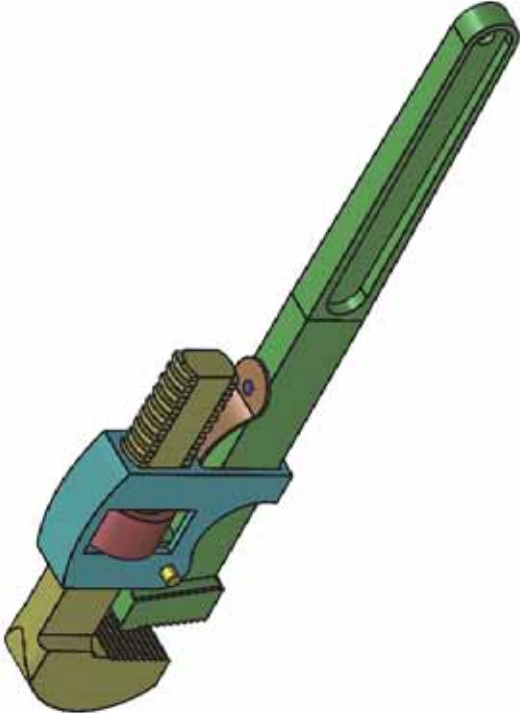
ANGLE OF PROJECTION



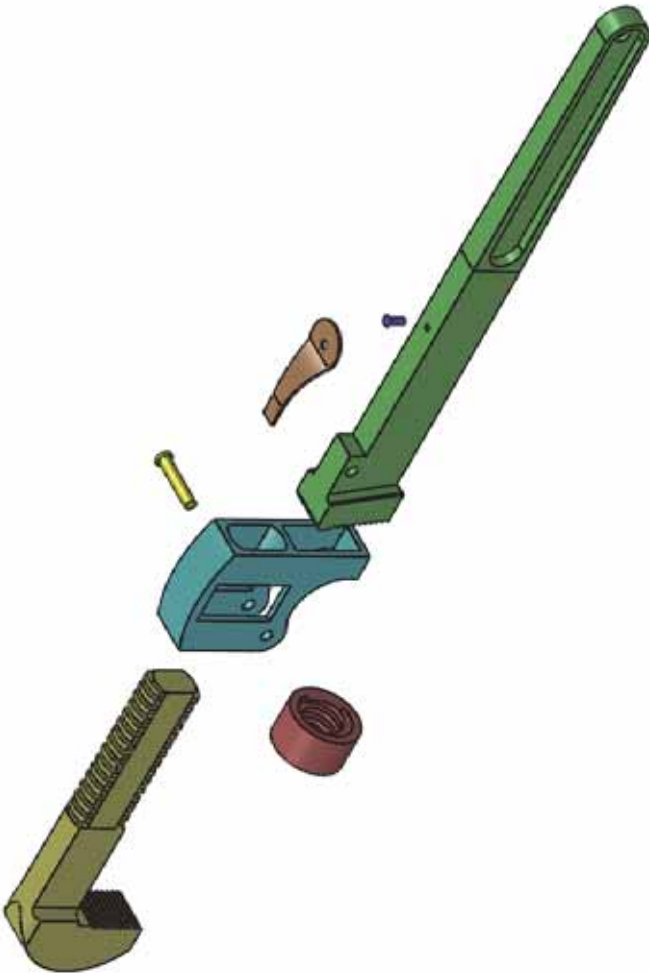
ALL DIMENSIONS ARE IN MM

PIPE WRENCH





STANDARD ASSEMBLY



EXPLODED VIEW

DESCRIPTION. PIPE WRENCH_EXPLODED

SHEET

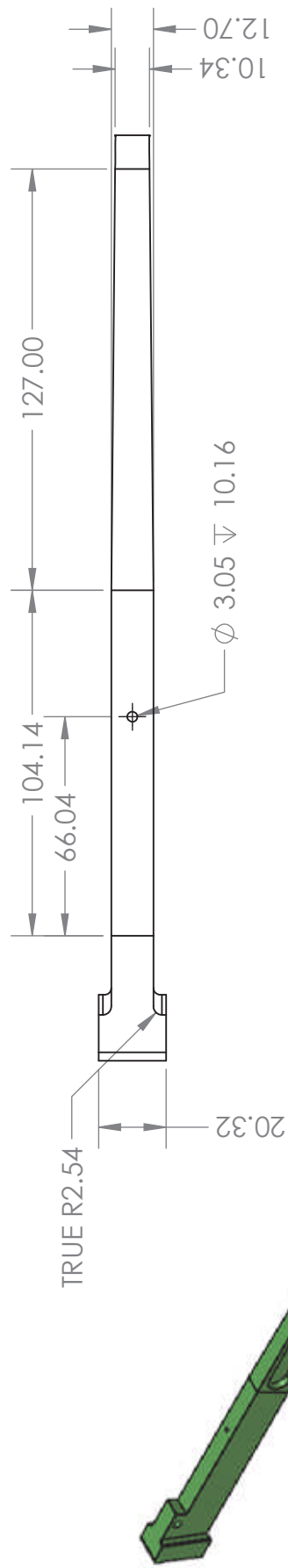
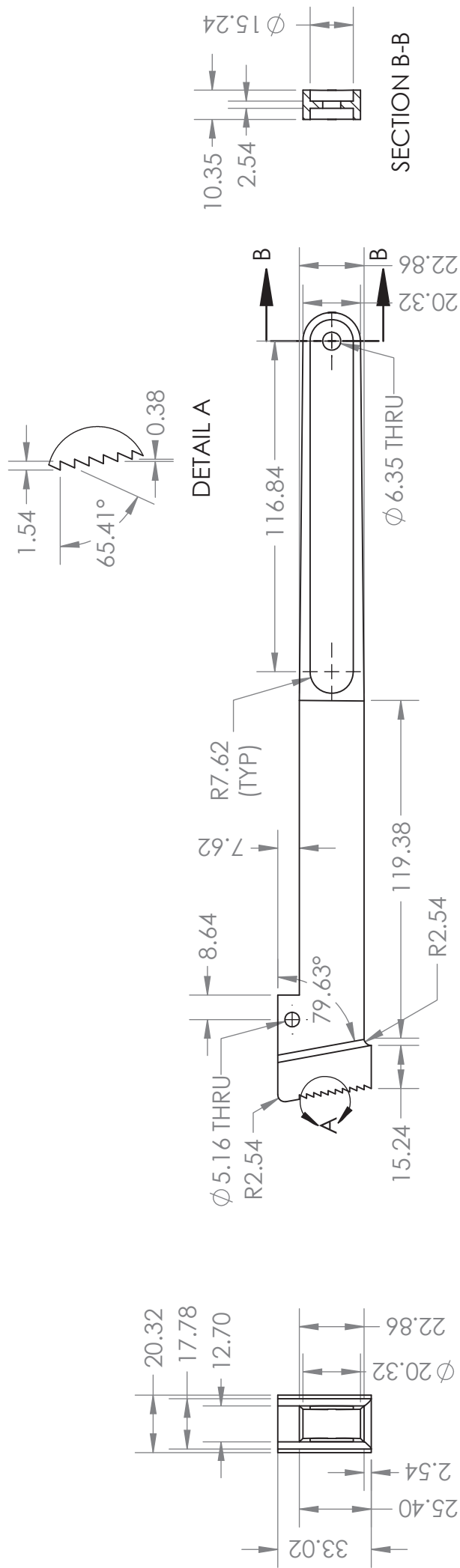
1 OF 1

ANGLE OF PROJECTION

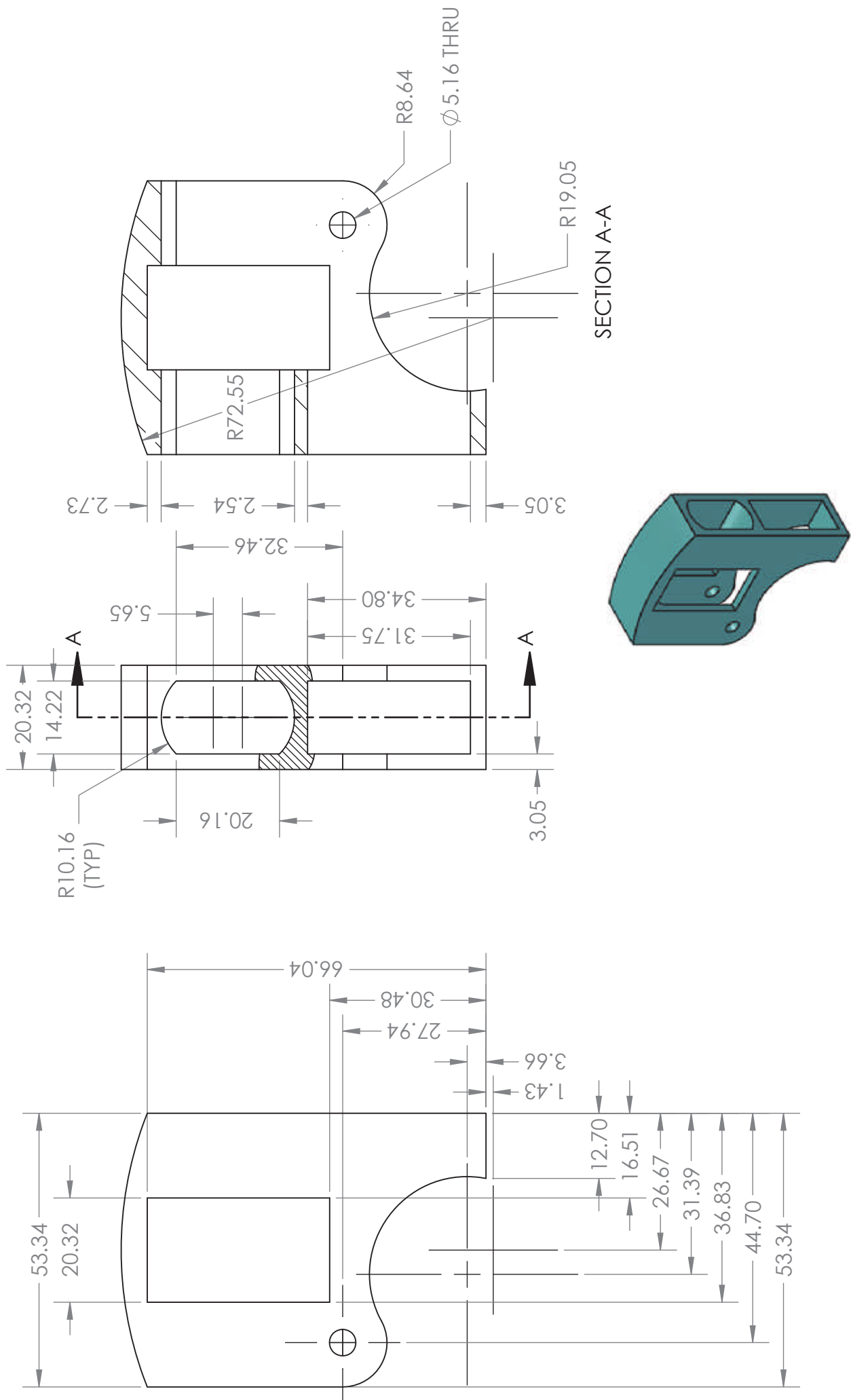


ALL DIMENSIONS ARE IN MM

ISOMETRIC VIEW	ISOMETRIC VIEW	DESCRIPTION. Button Head Rivet & Grooved Stud SHEET 1 OF 1 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM
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DESCRIPTION.	Handle	SHEET 1 OF 1	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



DESCRIPTION.

Head

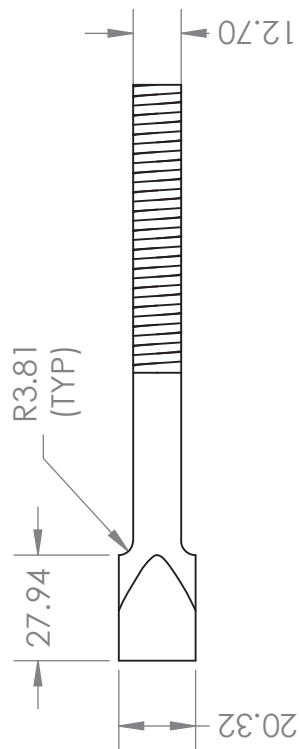
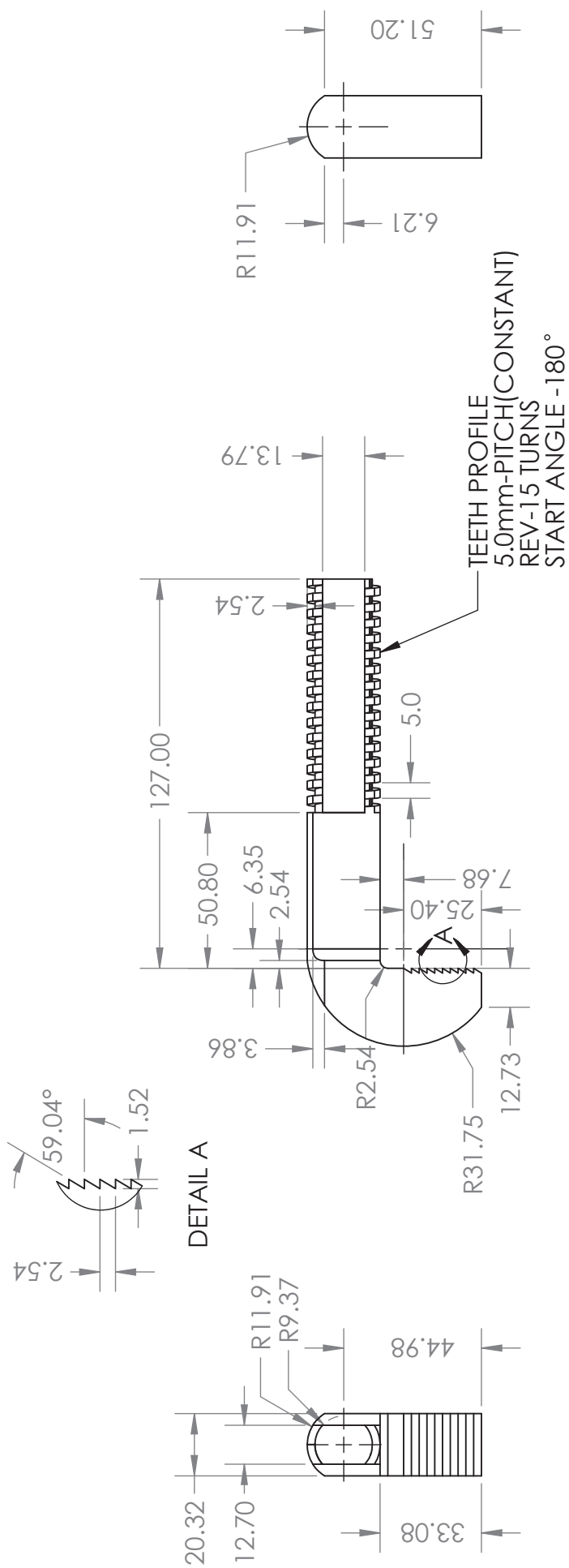
SHEET

1 OF 1

ANGLE OF PROJECTION

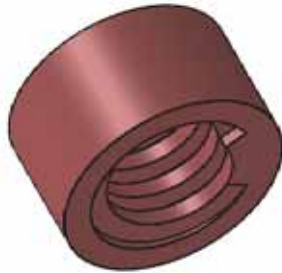
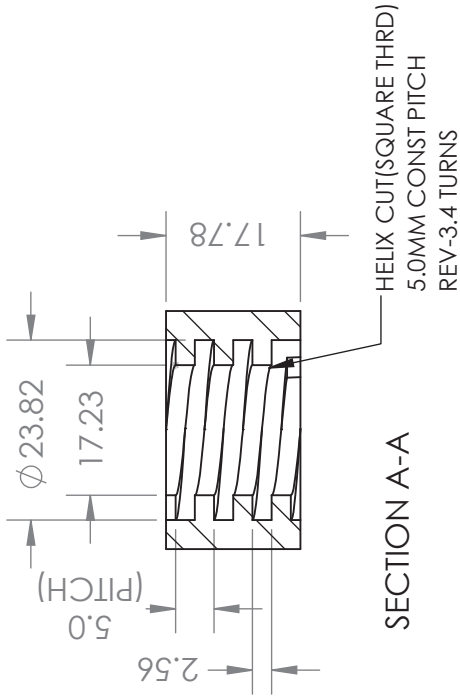
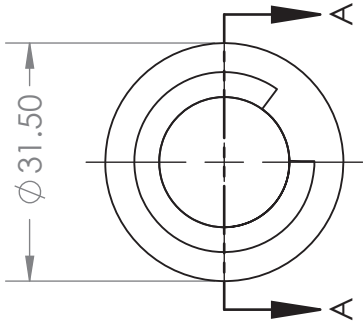


ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.	Moveable Jaw	SHEET	1 OF 1	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

DESCRIPTION. Nut & Spring

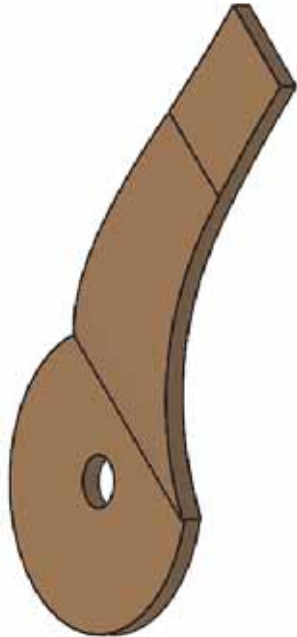
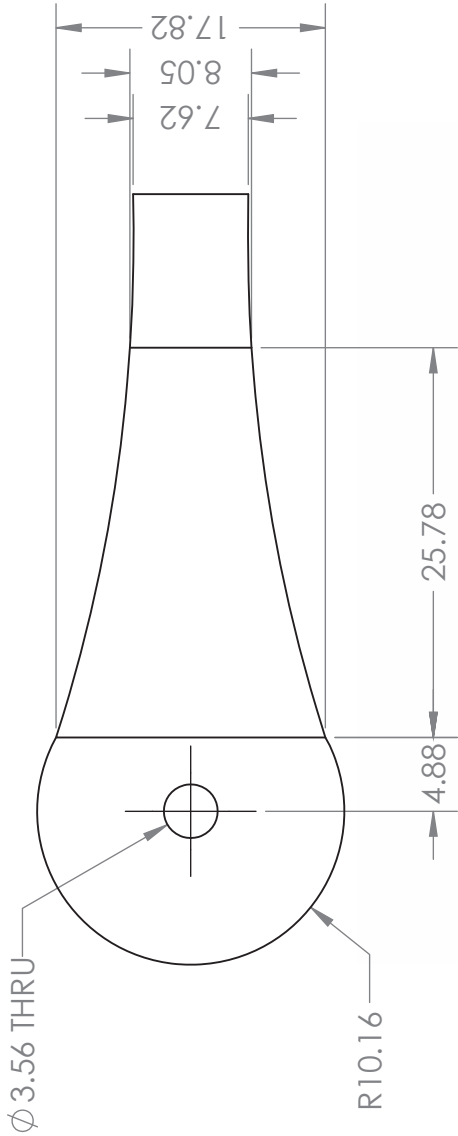
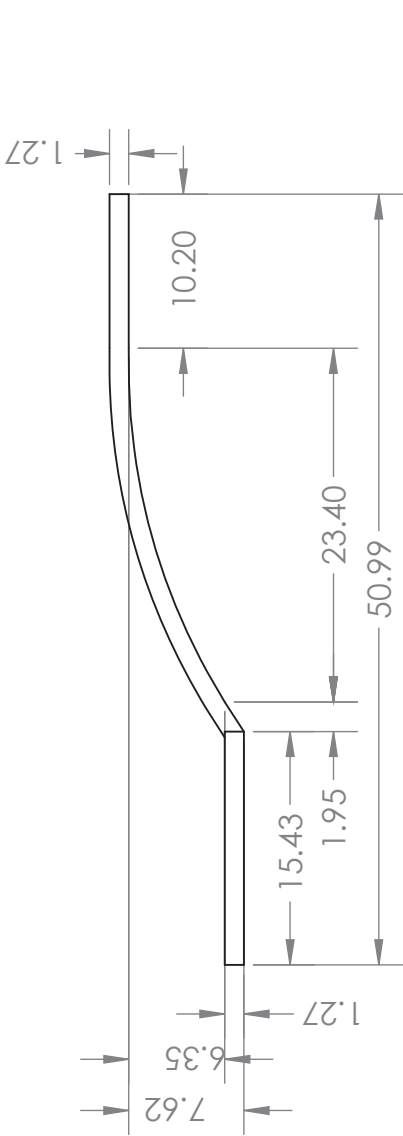
SHEET

1 OF 1

ANGLE OF PROJECTION

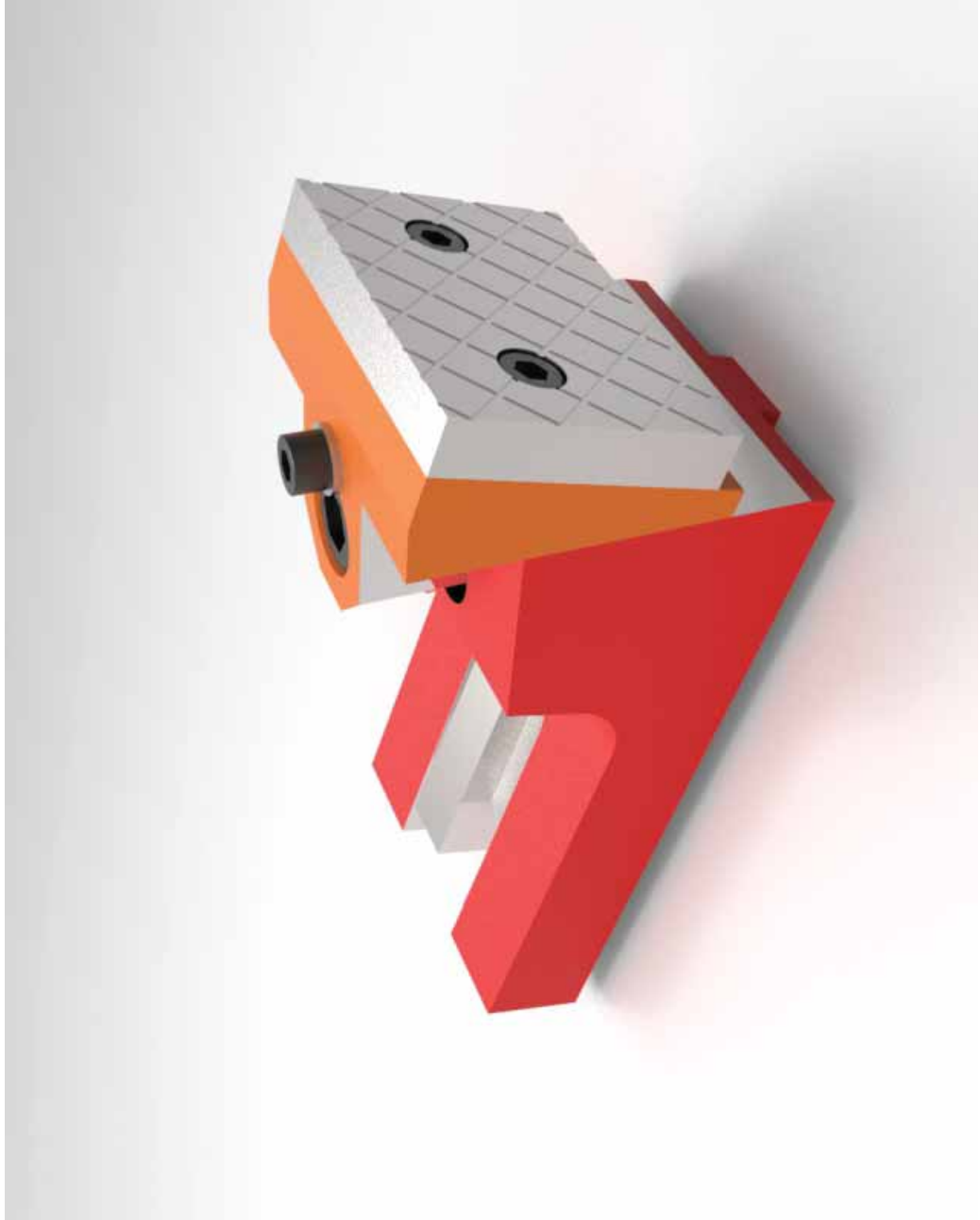


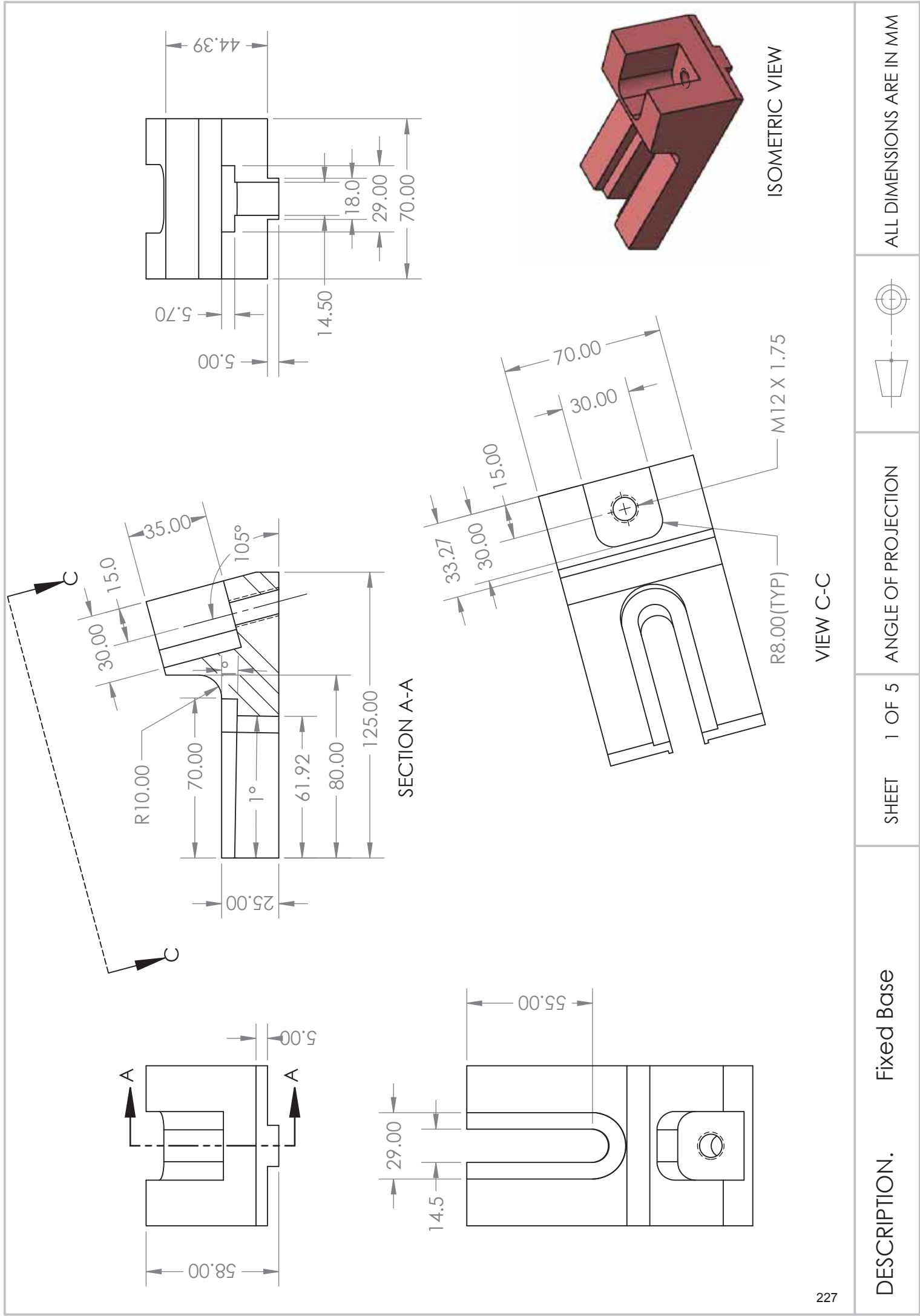
ALL DIMENSIONS ARE IN MM



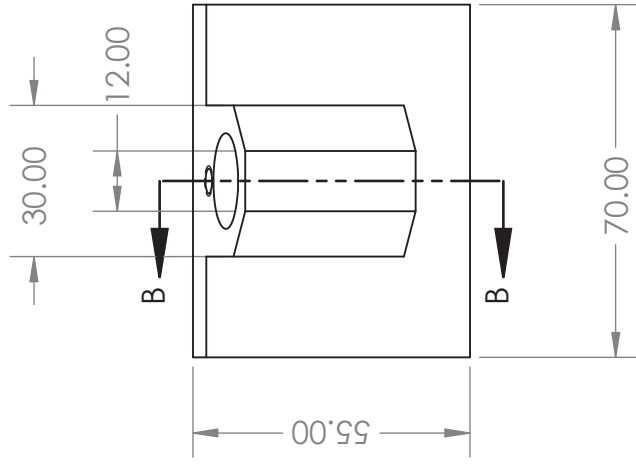
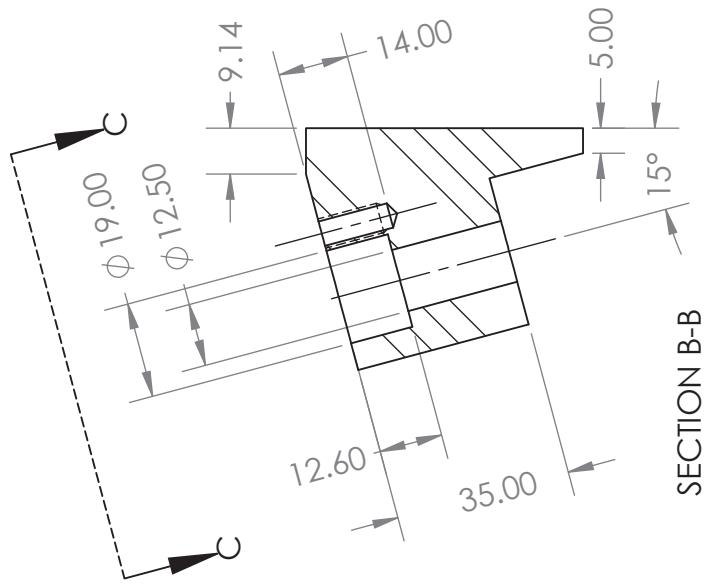
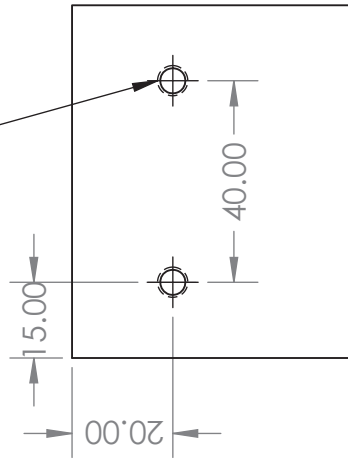
ISOMETRIC VIEW

PLATE CLAMP

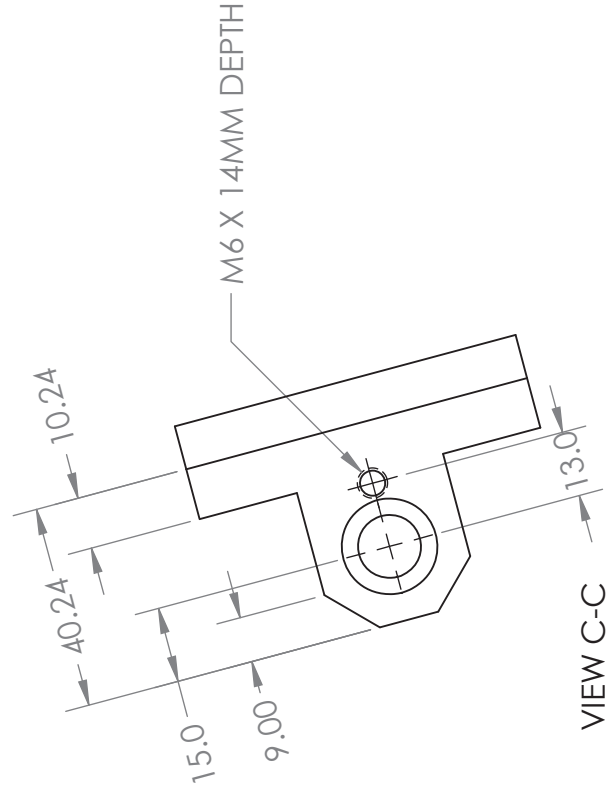




M6 X 11MM DEPTH
(TYP)



ISOMETRIC VIEW



VIEW C-C

DESCRIPTION:

Movable Jaw

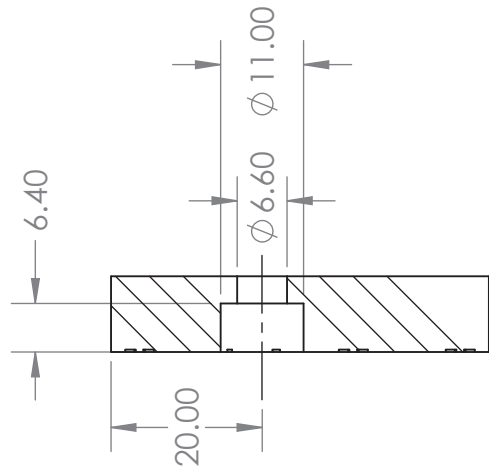
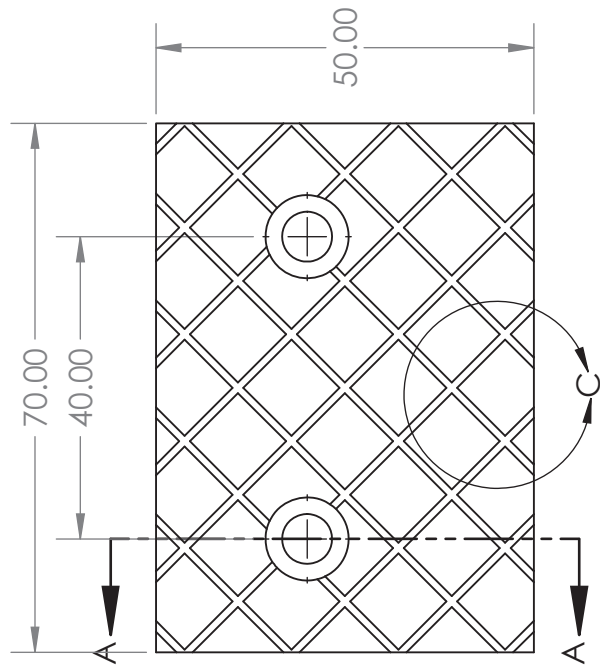
SHEET

2 OF 5

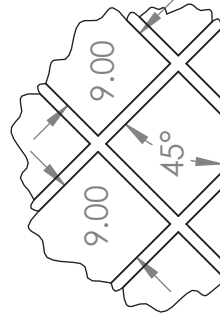
ANGLE OF PROJECTION



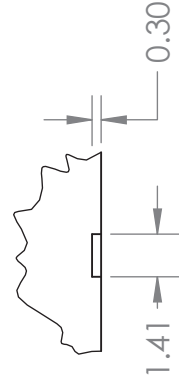
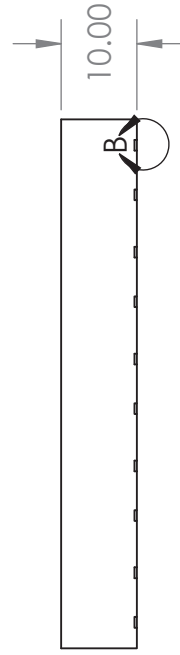
ALL DIMENSIONS ARE IN MM



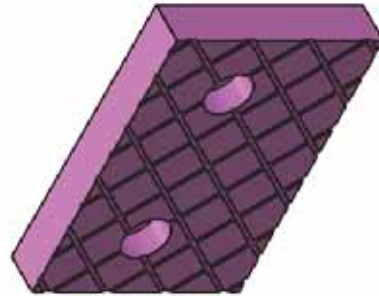
SECTION A-A



DETAIL C
SCALE 1.5:1



DETAIL B



ISOMETRIC VIEW

DESCRIPTION.

Jaw Plate

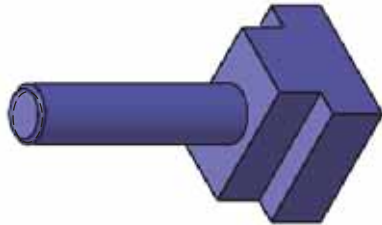
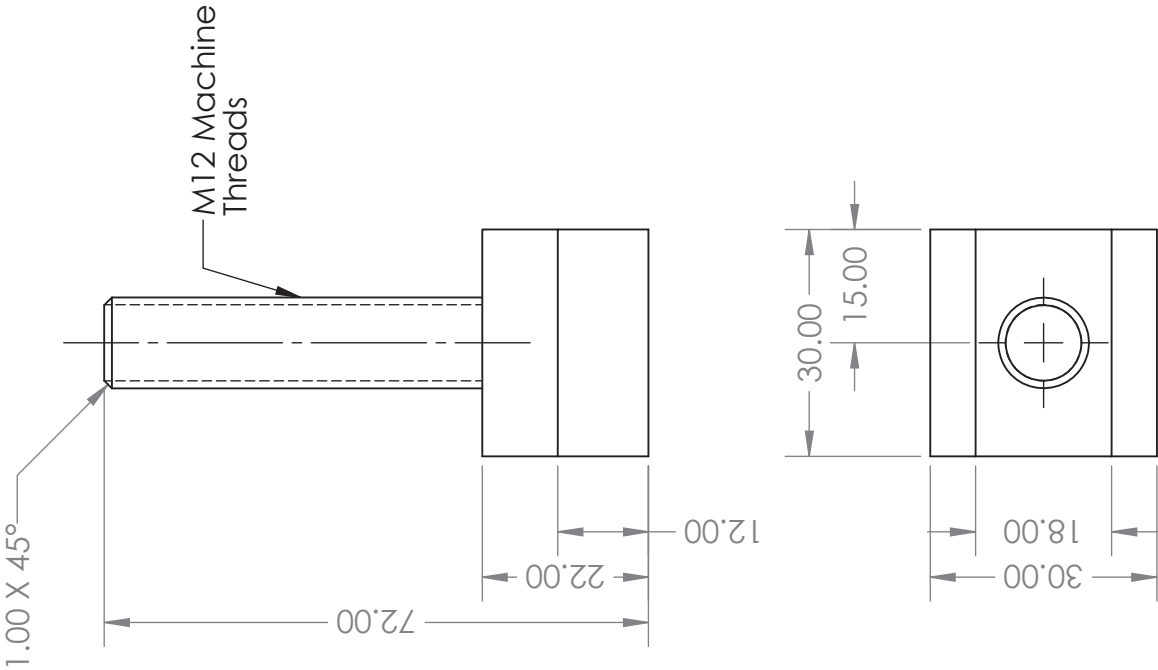
SHEET

3 OF 5

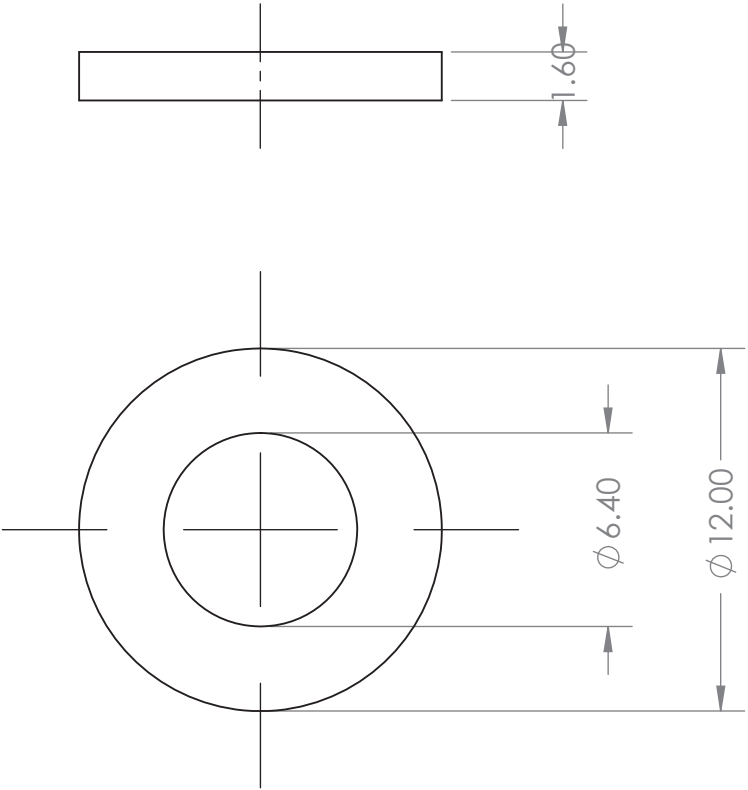
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

T Nut & Washer

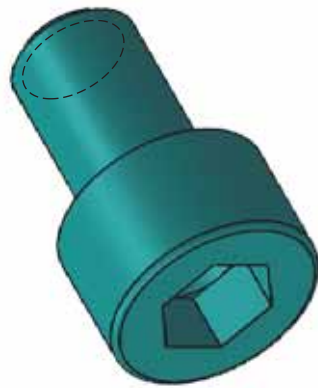
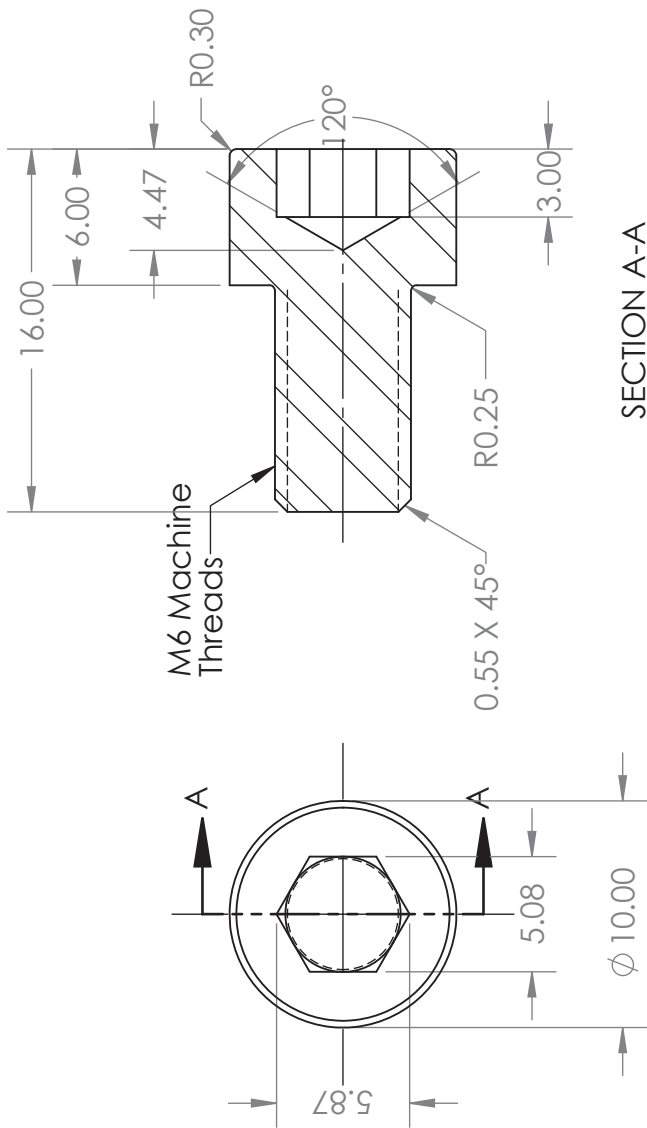
SHEET

4 OF 5

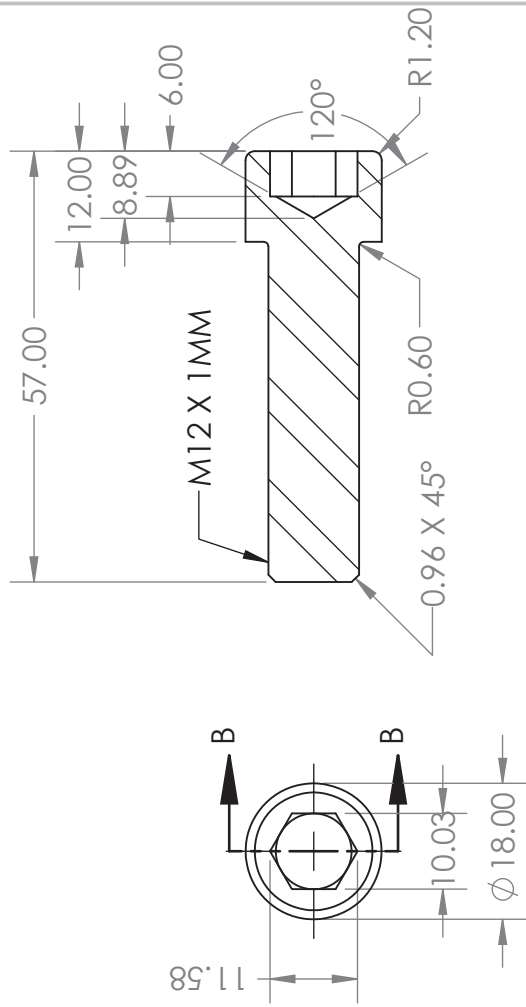
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION.

Screws

SHEET

5 OF 5

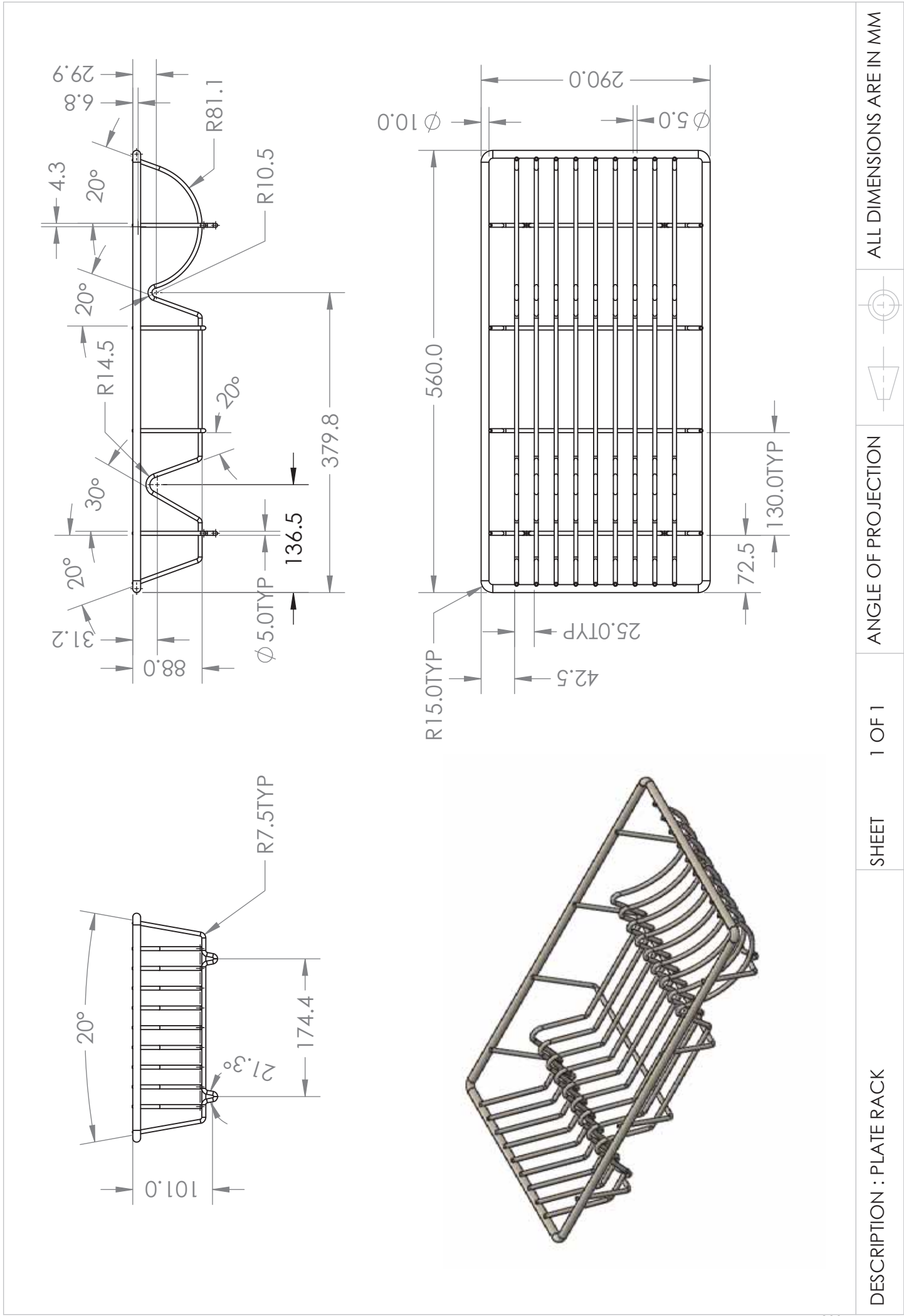
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

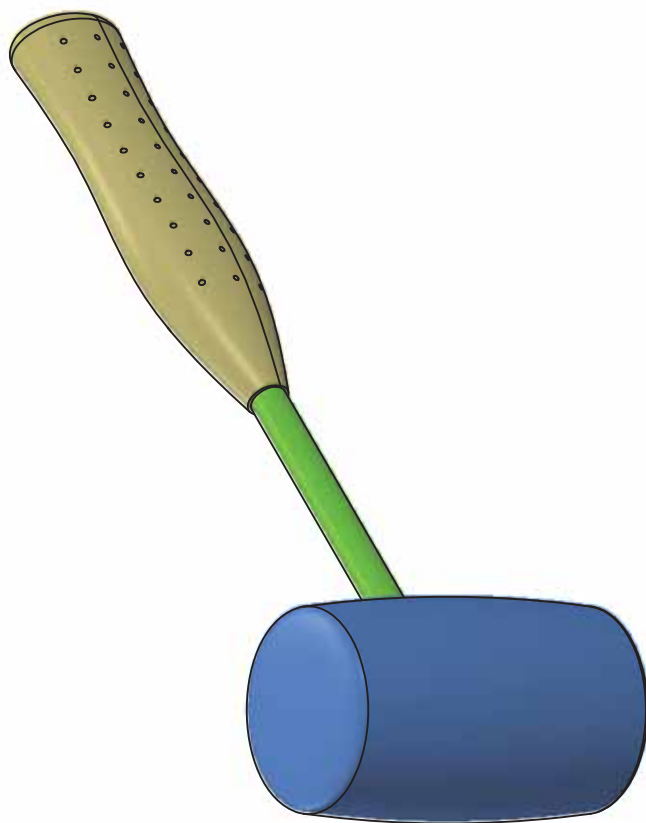
PLATE RACK





RUBBER Mallet





ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION. Exploded View

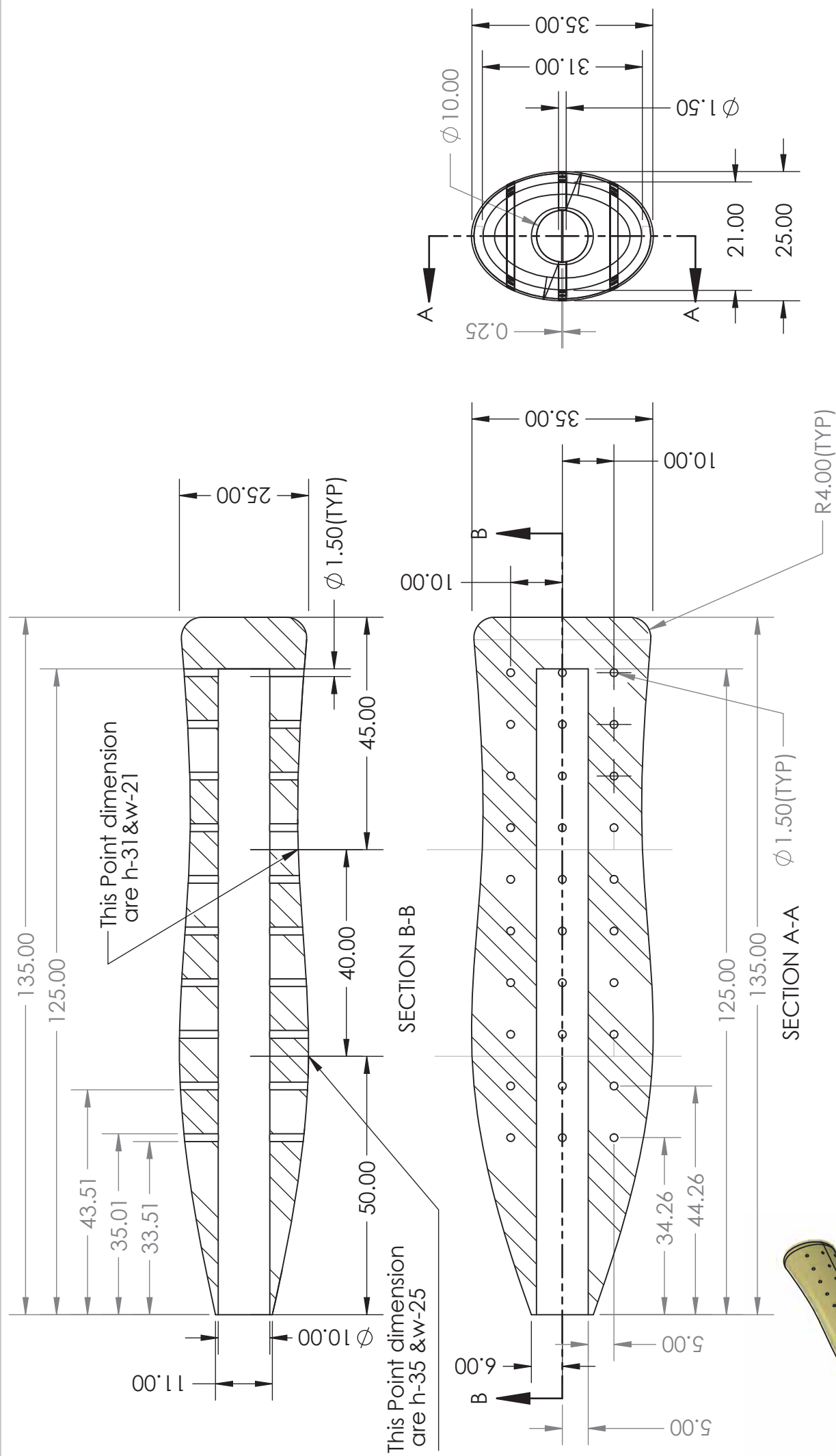
SHEET

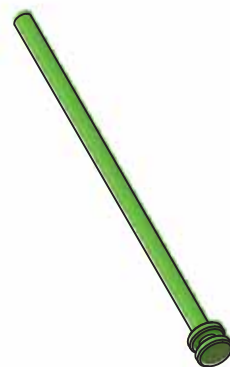
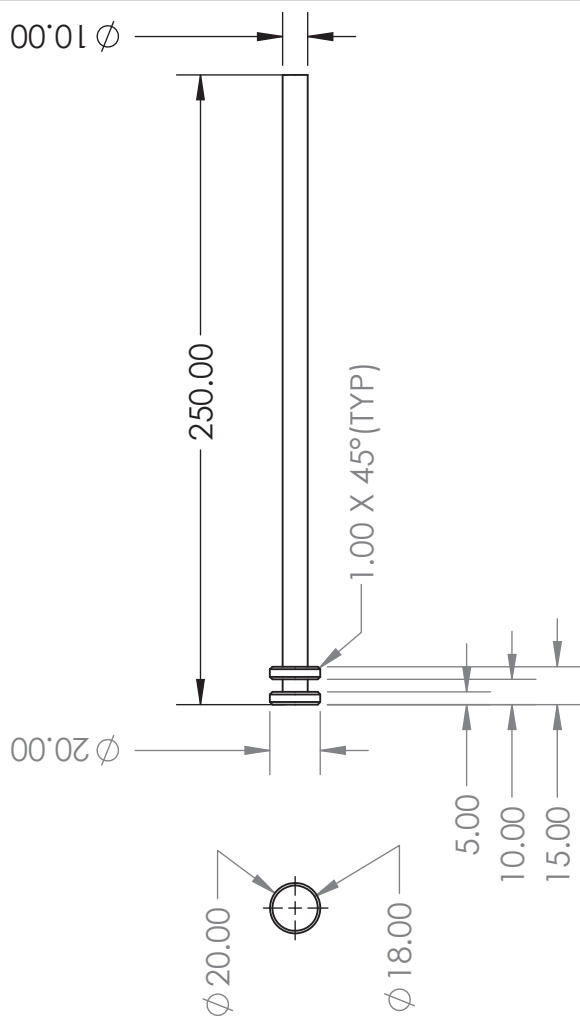
1 OF 1

ANGLE OF PROJECTION

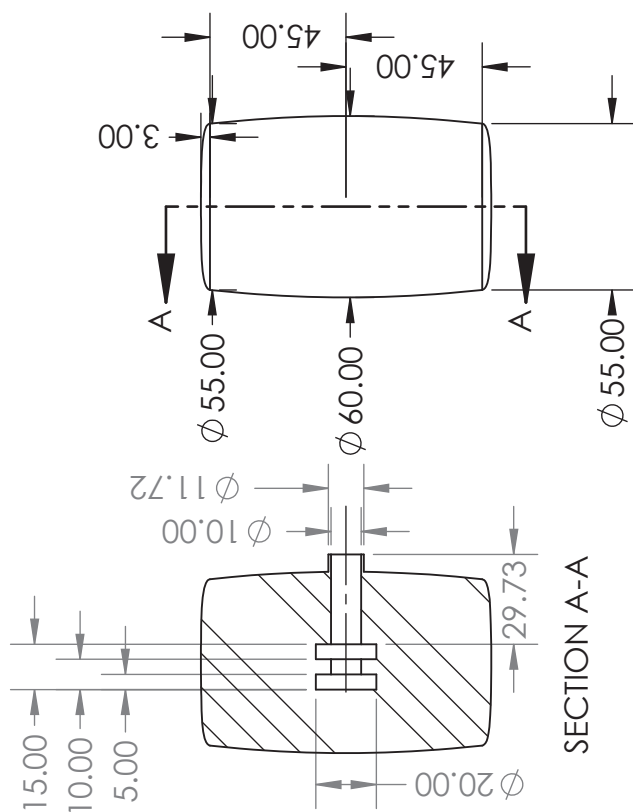


ALL DIMENSIONS ARE IN MM





ISOMETRIC VIEW



ISOMETRIC VIEW



ANGLE OF PROJECTION

2 OF 2

SHEET

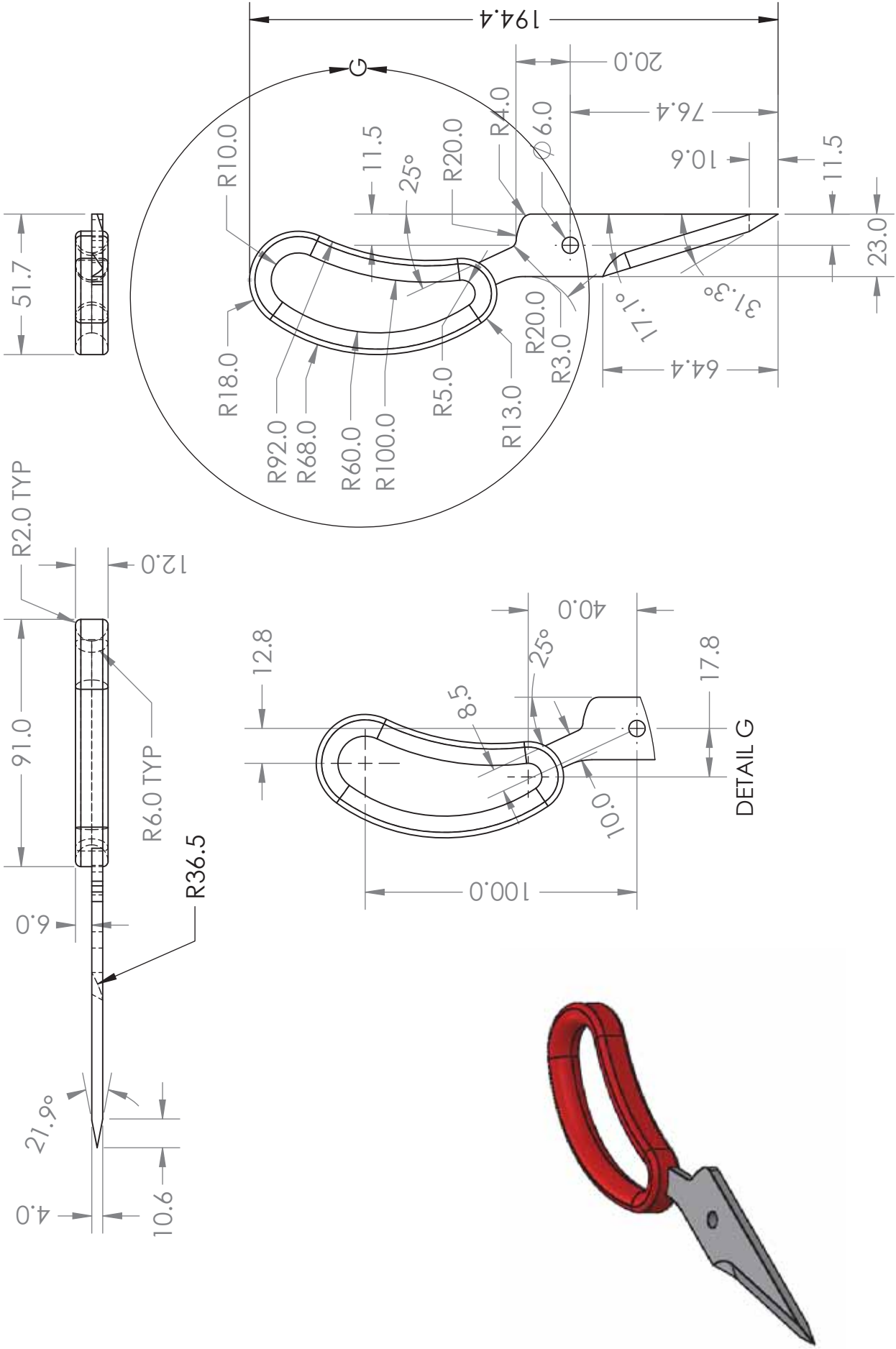
Rod & Head

DESCRIPTION.

ALL DIMENSIONS ARE IN MM

SCISSORS





ALL DIMENSIONS ARE IN MM

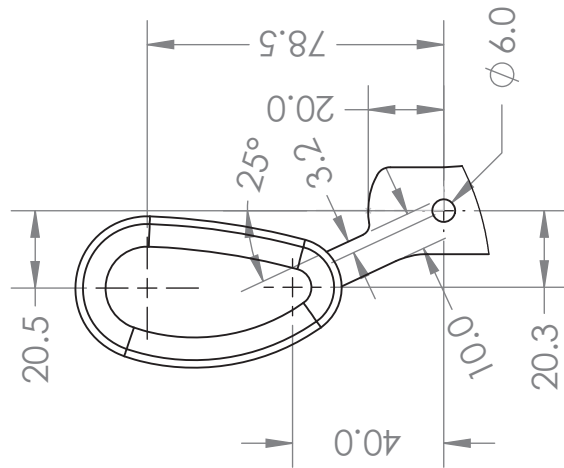
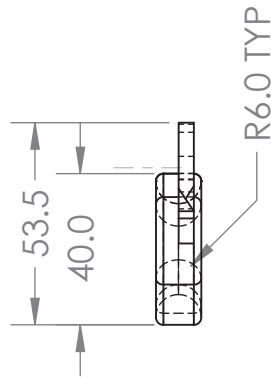
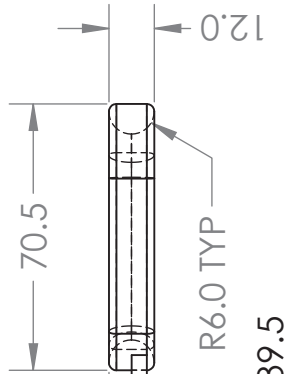
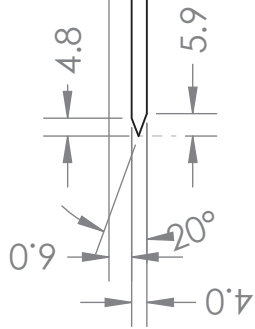


ANGLE OF PROJECTION

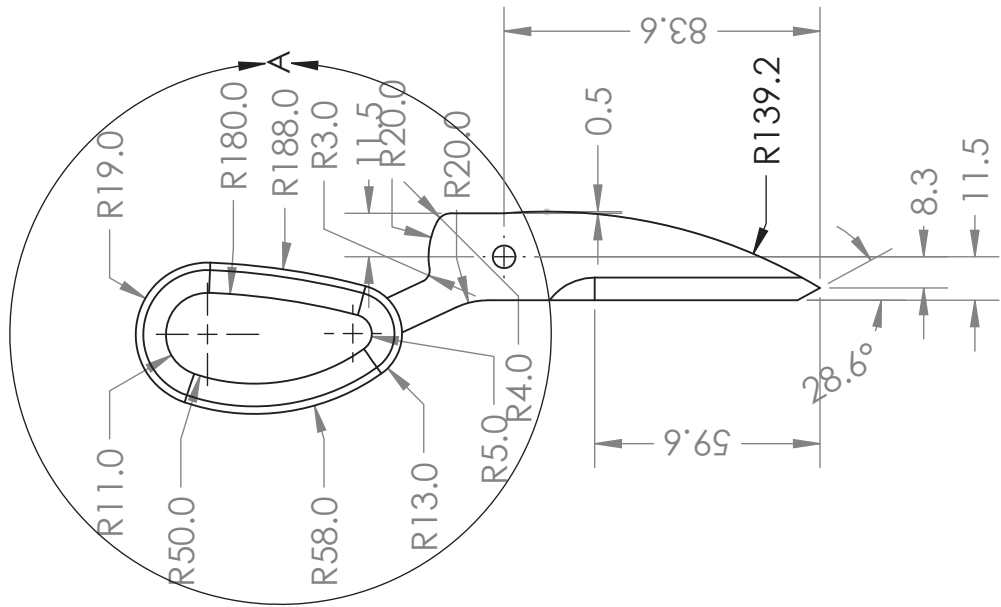
1 OF 4

SHEET

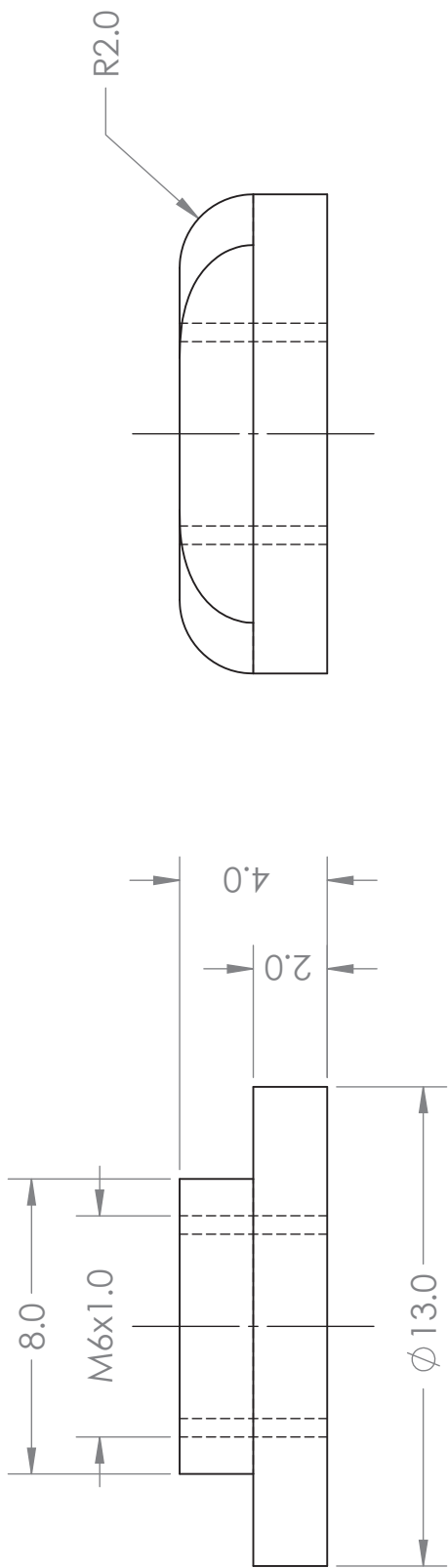
DESCRIPTION : BLADE-1



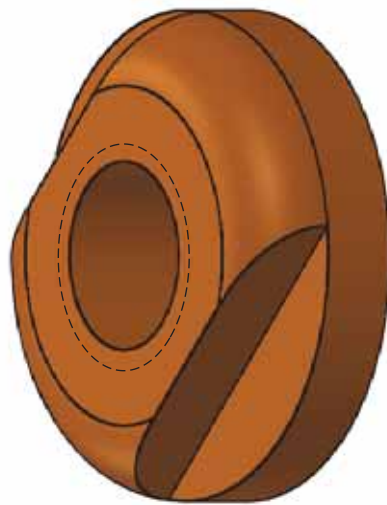
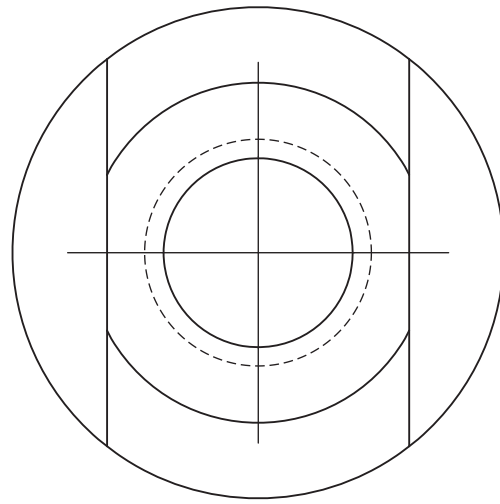
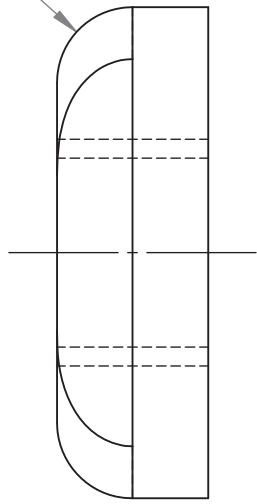
DETAIL A



DESCRIPTION : Blade -2	SHEET	4 OF 4	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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R2.0



DESCRIPTION : NUT

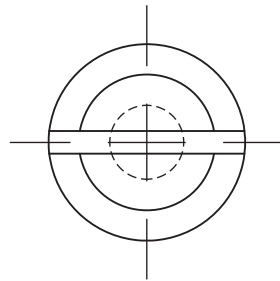
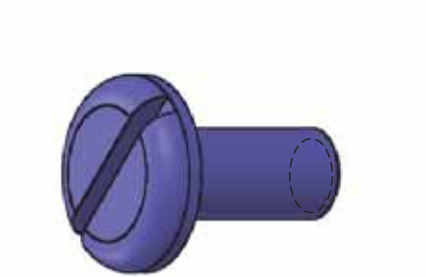
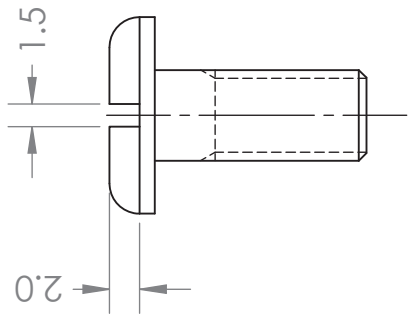
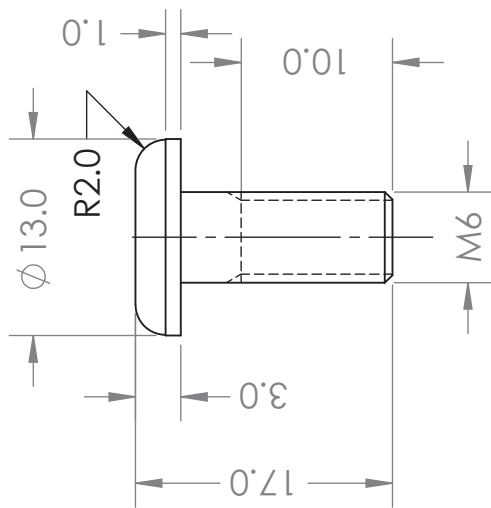
SHEET

3 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

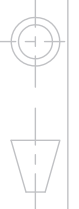


DESCRIPTION : M6 SCREW

SHEET

2 OF 4

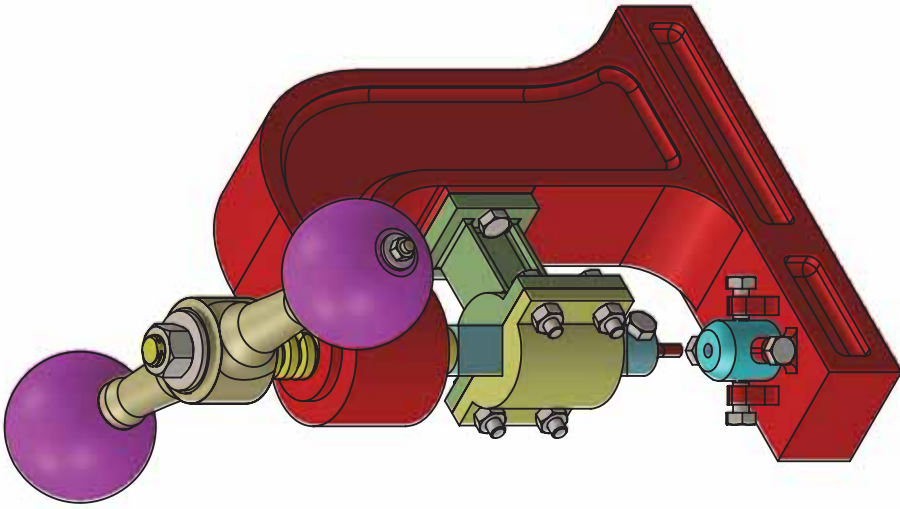
ANGLE OF PROJECTION



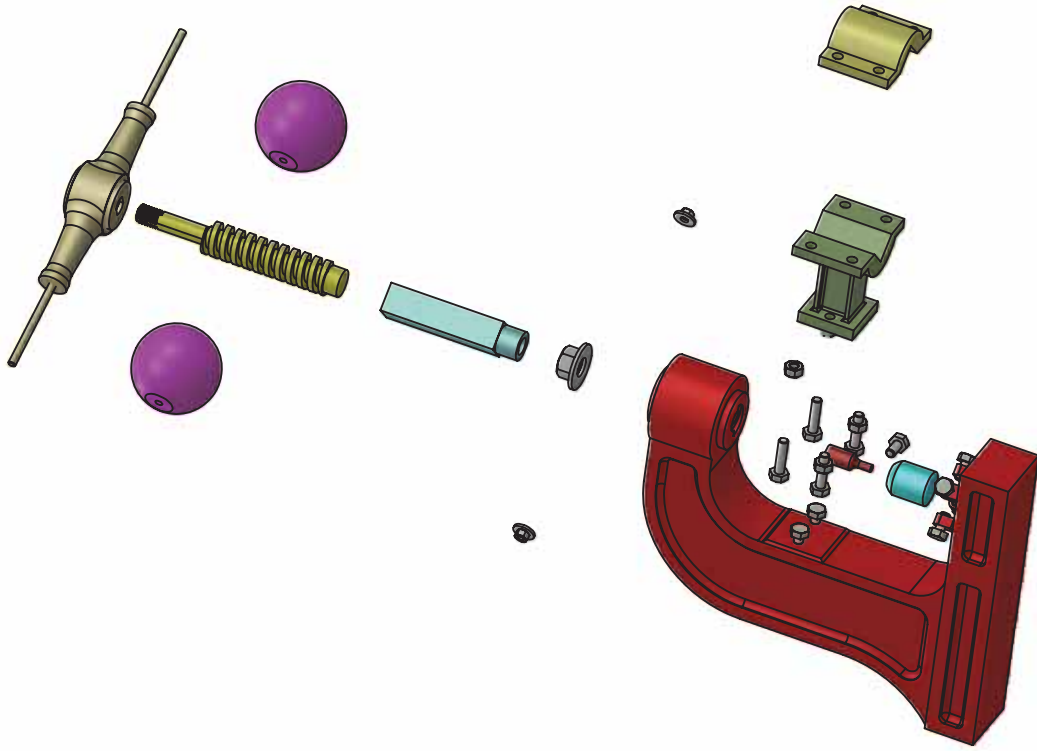
ALL DIMENSIONS ARE IN MM

SCREW PUNCHING MACHINE





ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION.Exploded View

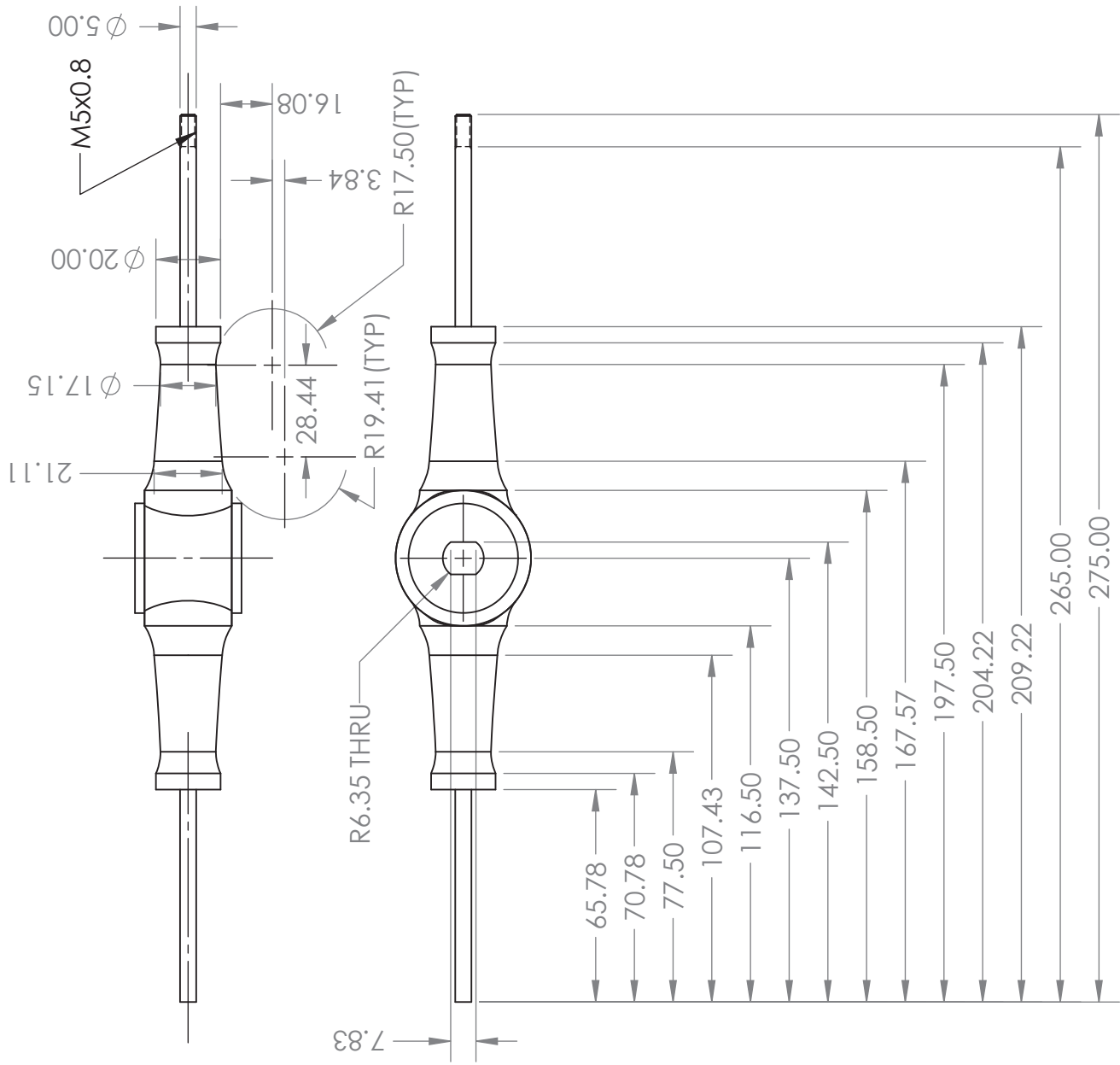
SHEET

1 OF 1

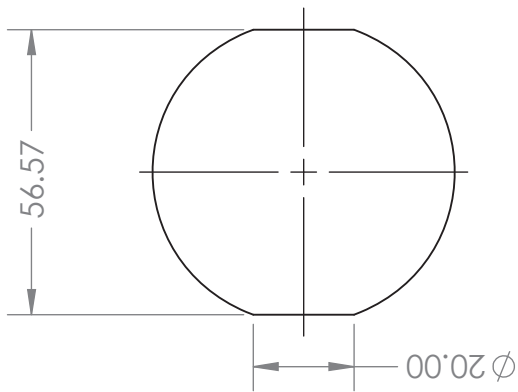
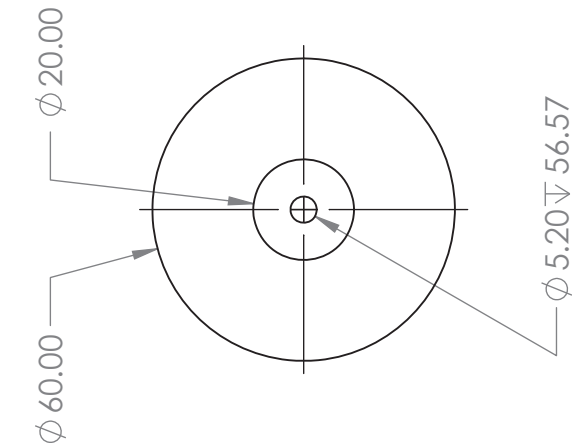
ANGLE OF PROJECTION



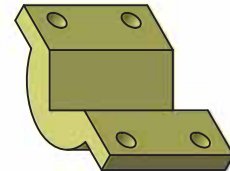
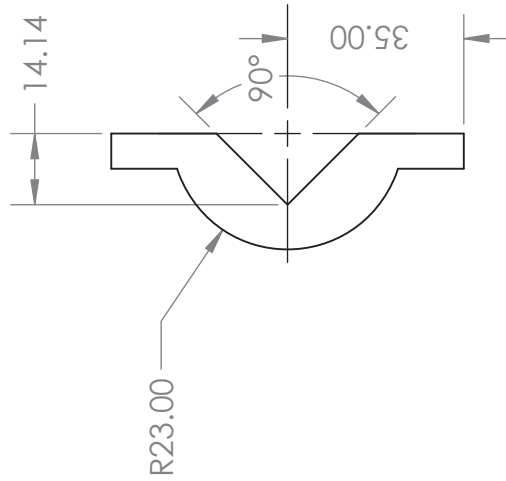
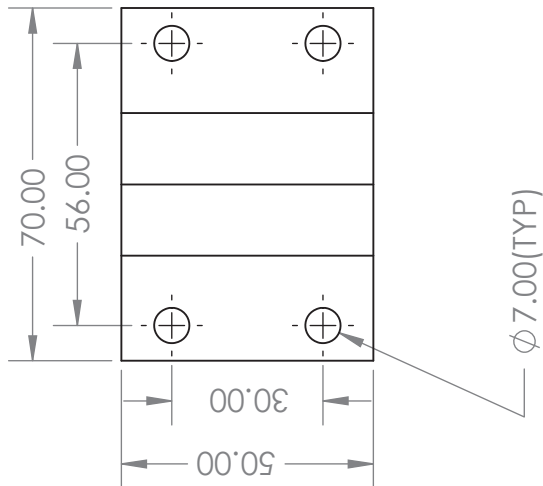
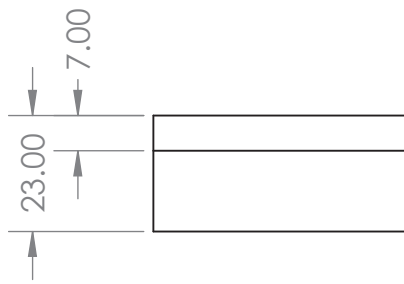
ALL DIMENSIONS ARE IN MM



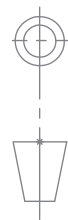
ISOMETRIC VIEW

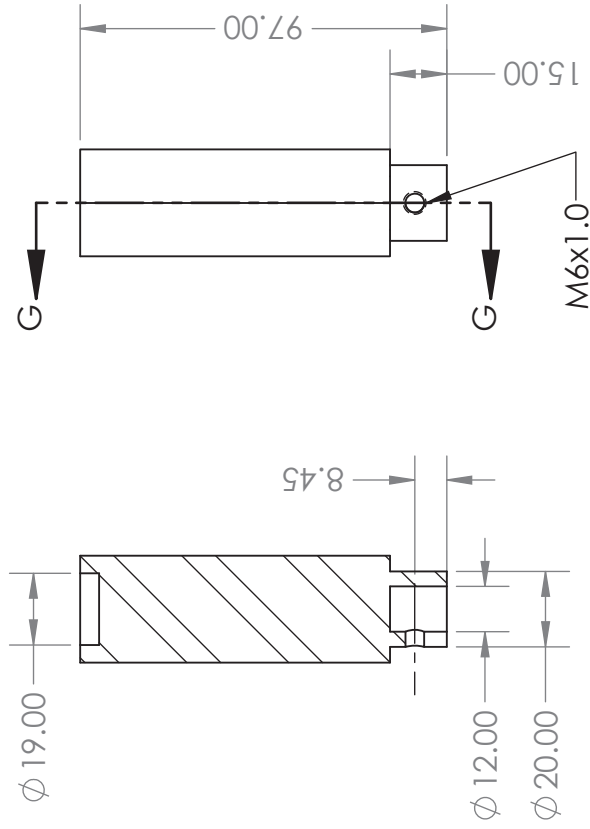


ISOMETRIC VIEW

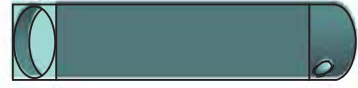


ISOMETRIC VIEW





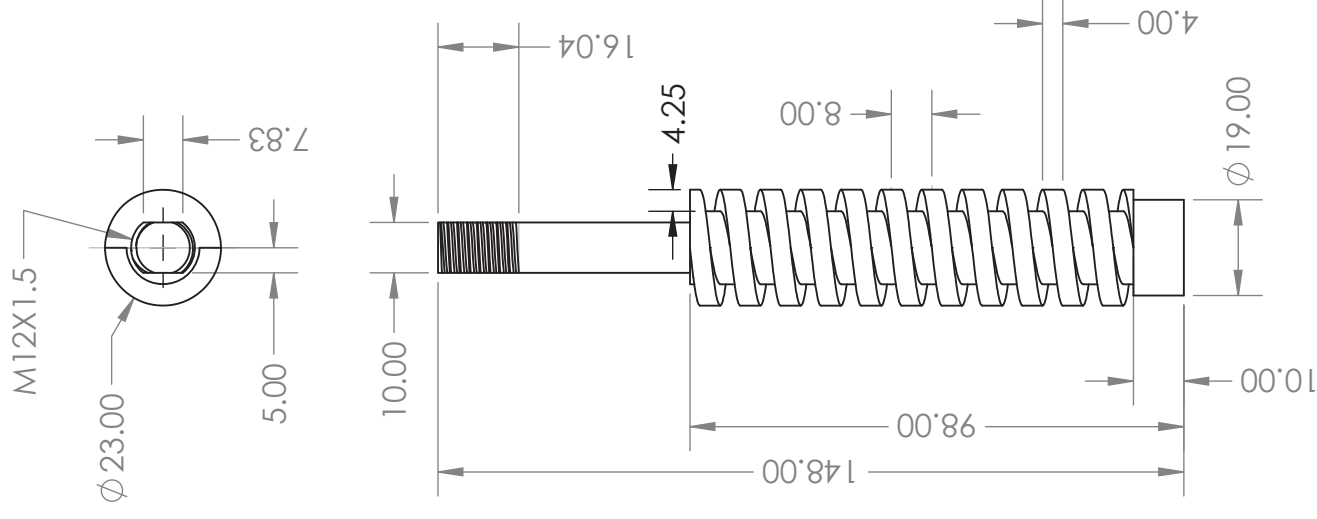
SECTION G-G



ISOMETRIC VIEW



ISOMETRIC VIEW



DESCRIPTION. Screw Rod

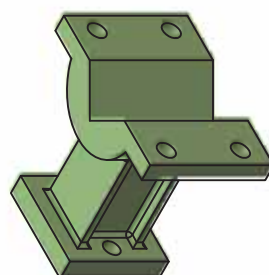
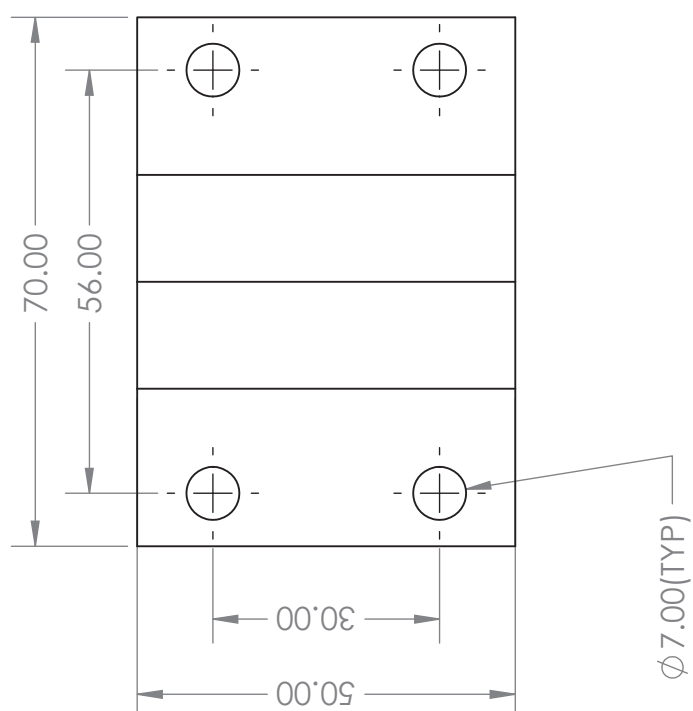
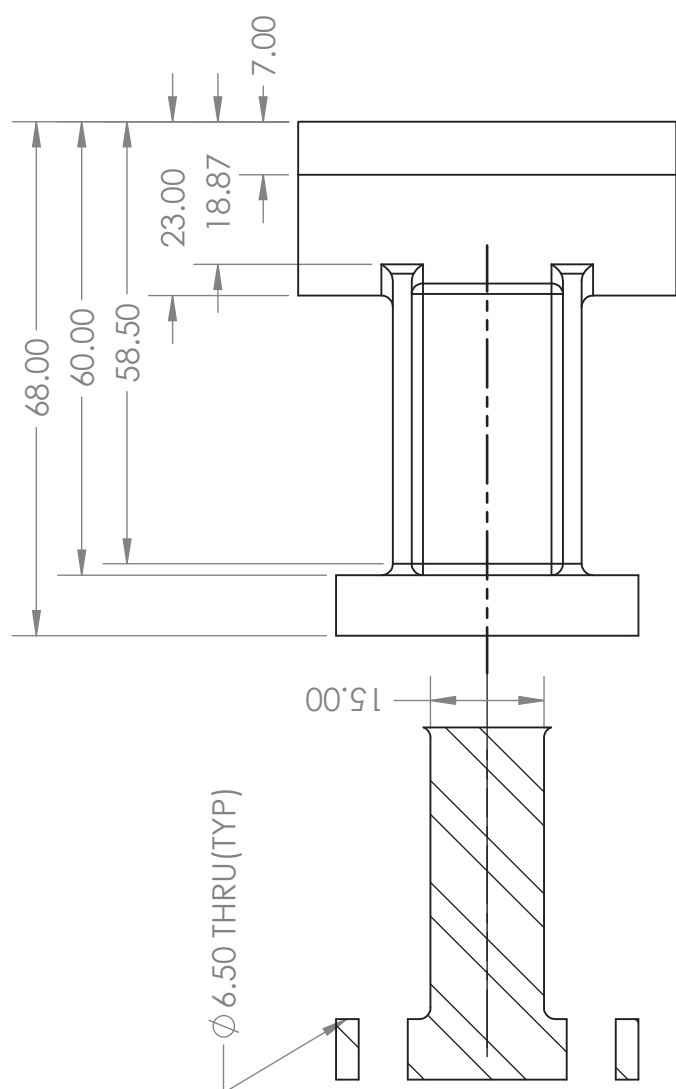
SHEET

4 OF 6

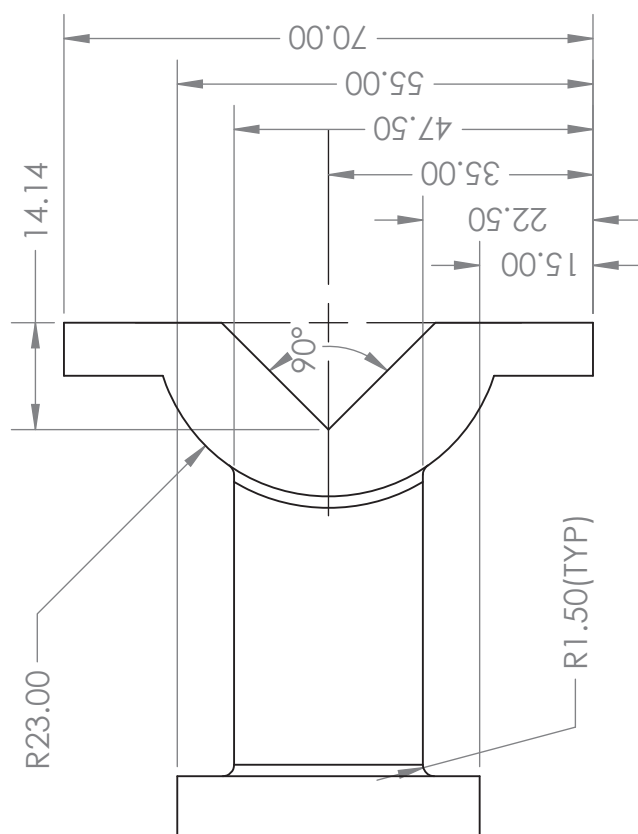
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



DESCRIPTION. Guide Bracket

SHEET

5 OF 6

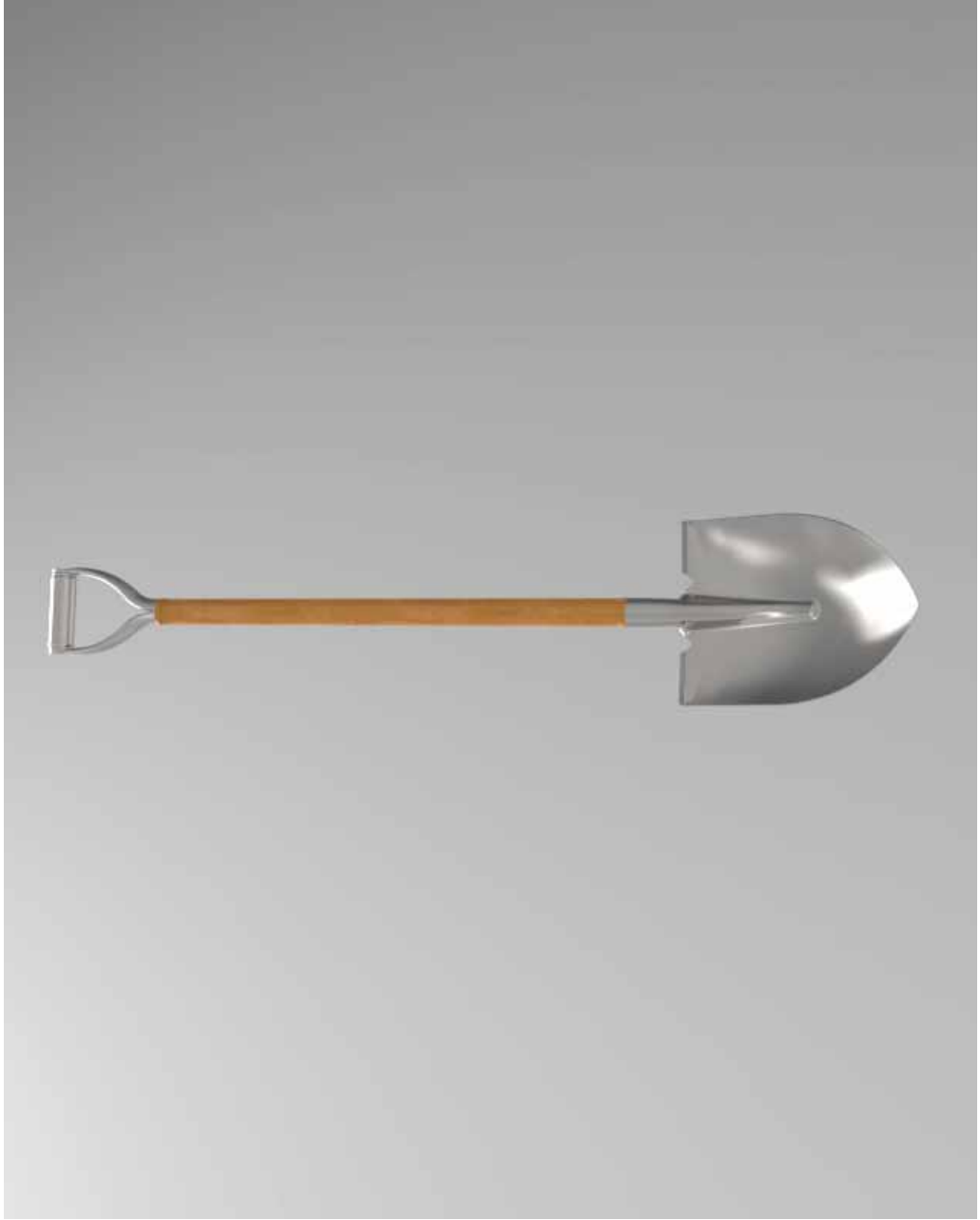
ANGLE OF PROJECTION

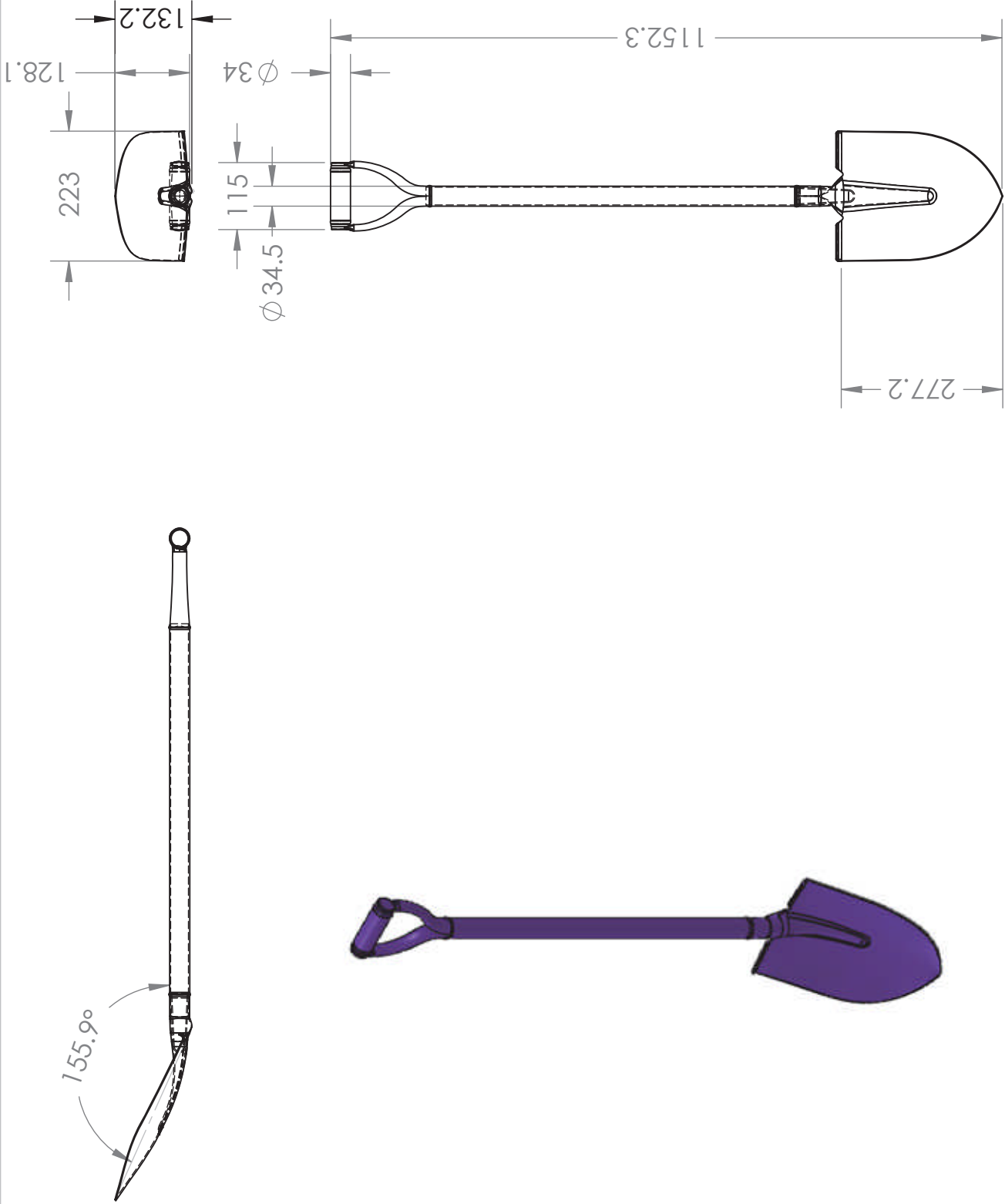


ALL DIMENSIONS ARE IN MM

ISOMETRIC VIEW	ISOMETRIC VIEW	DESCRIPTION. Punch & Die SHEET 6 OF 6 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM
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SHOVEL





DESCRIPTION : SHOVEL

SHEET

1 OF 1

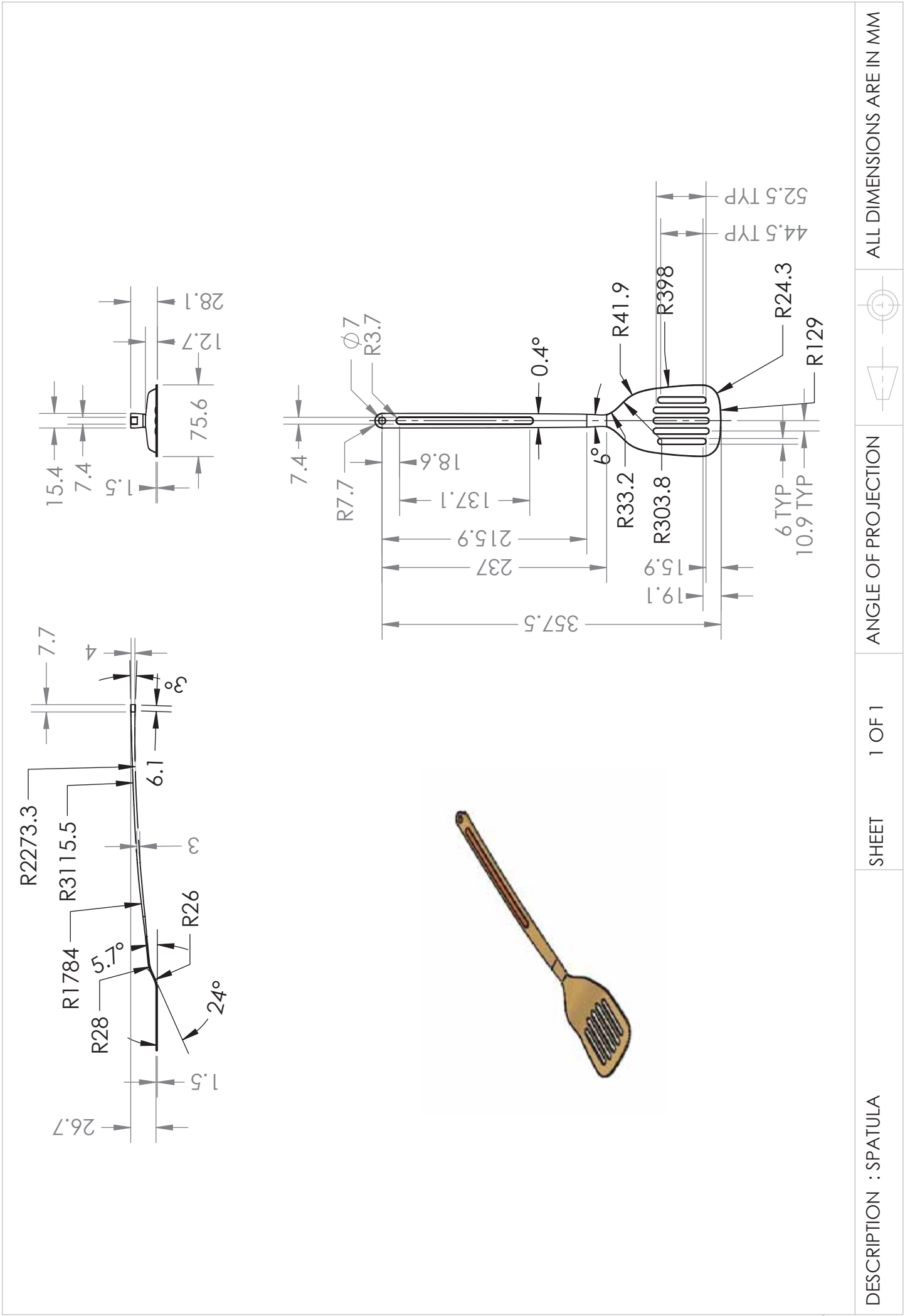
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

SLOTTED SPATULLA





ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

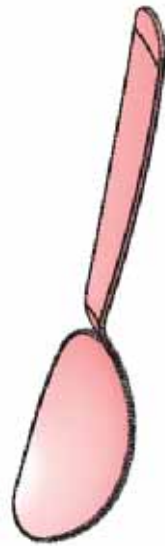
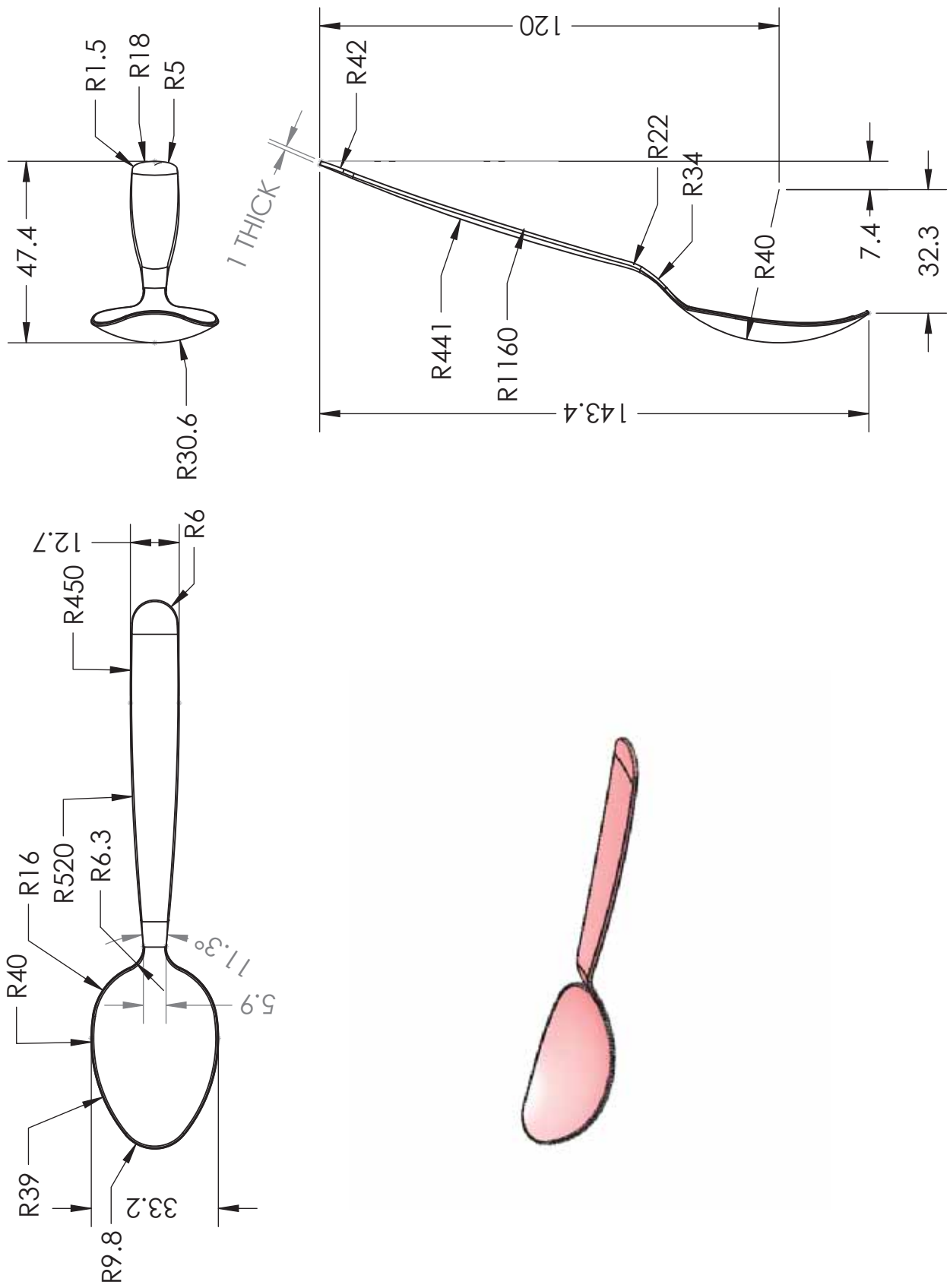
1 OF 1

SHEET

DESCRIPTION : SPATULA

SPOON





DESCRIPTION : SPOON

SHEET

1 OF 1

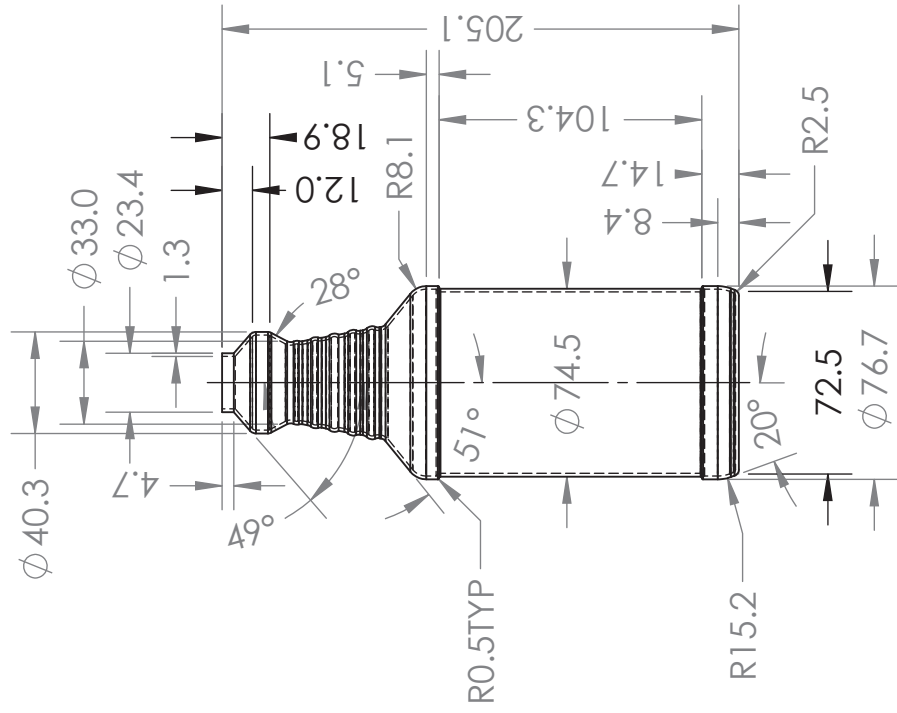
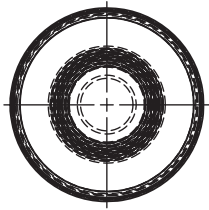
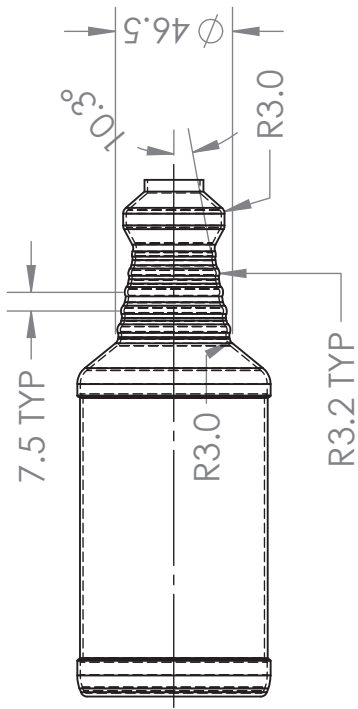
ANGLE OF PROJECTION



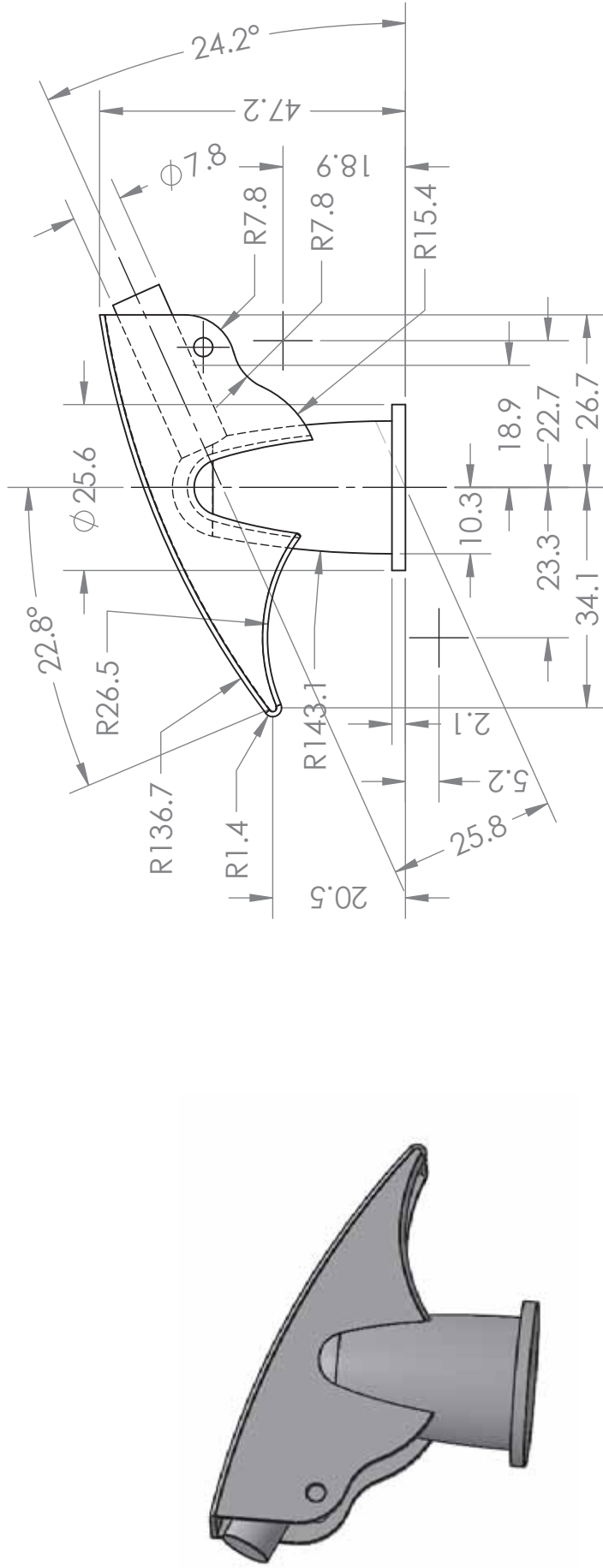
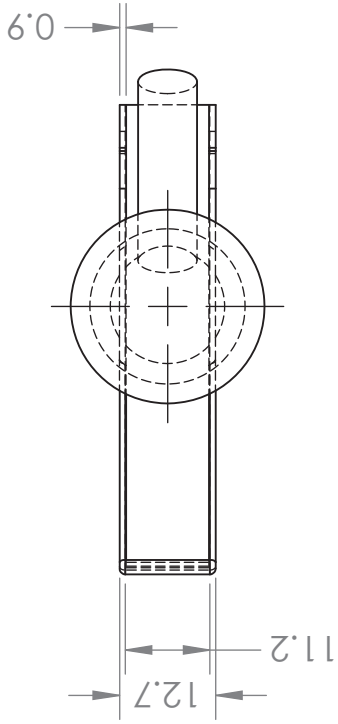
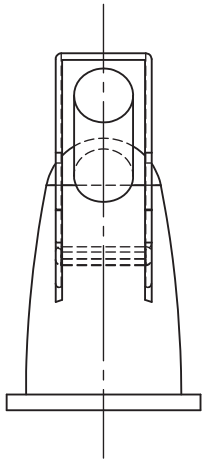
ALL DIMENSIONS ARE IN MM

SPRAY BOTTLE





DESCRIPTION: BOTTLE	SHEET	1 OF 5	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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DESCRIPTION : SPRAY BOTTLE TOP

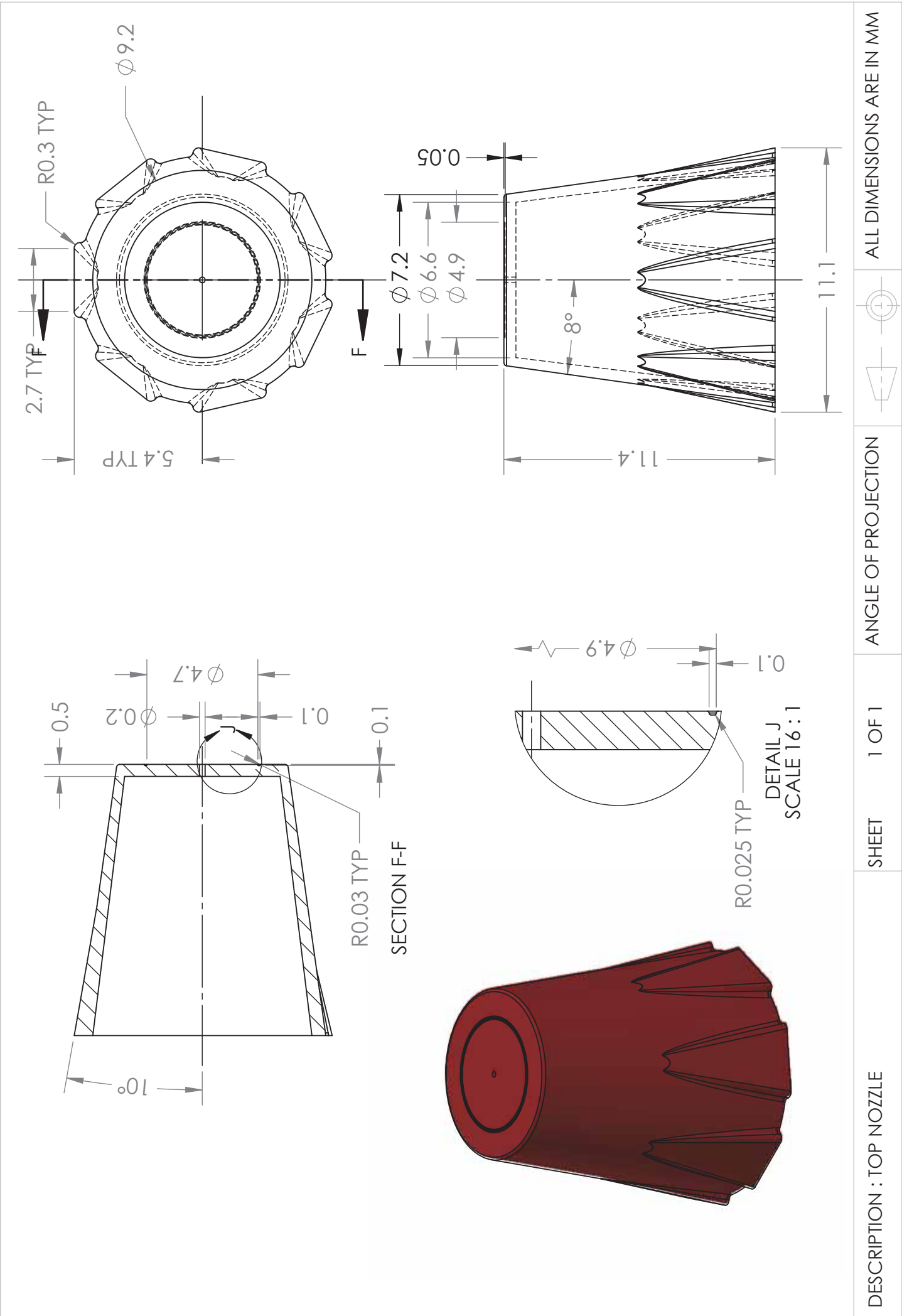
SHEET

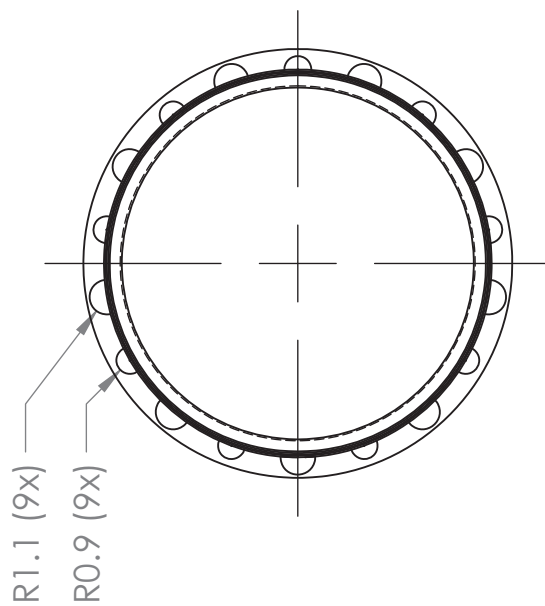
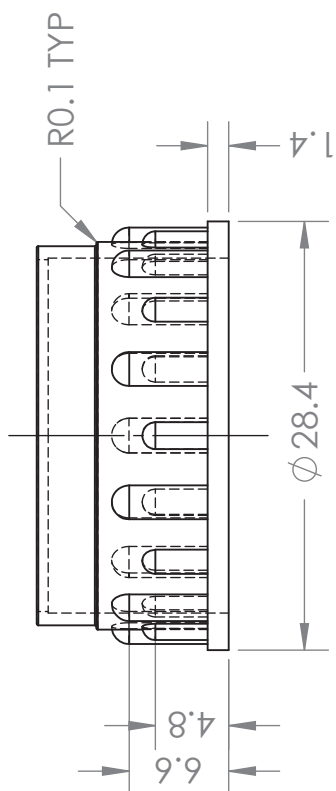
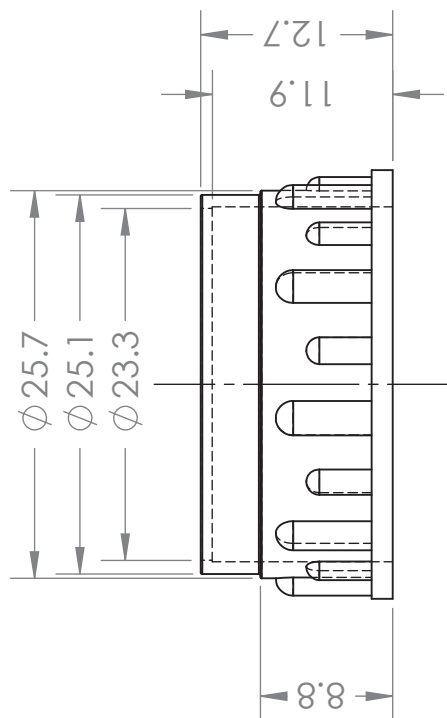
3 OF 5

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM





DESCRIPTION : TOP CAP

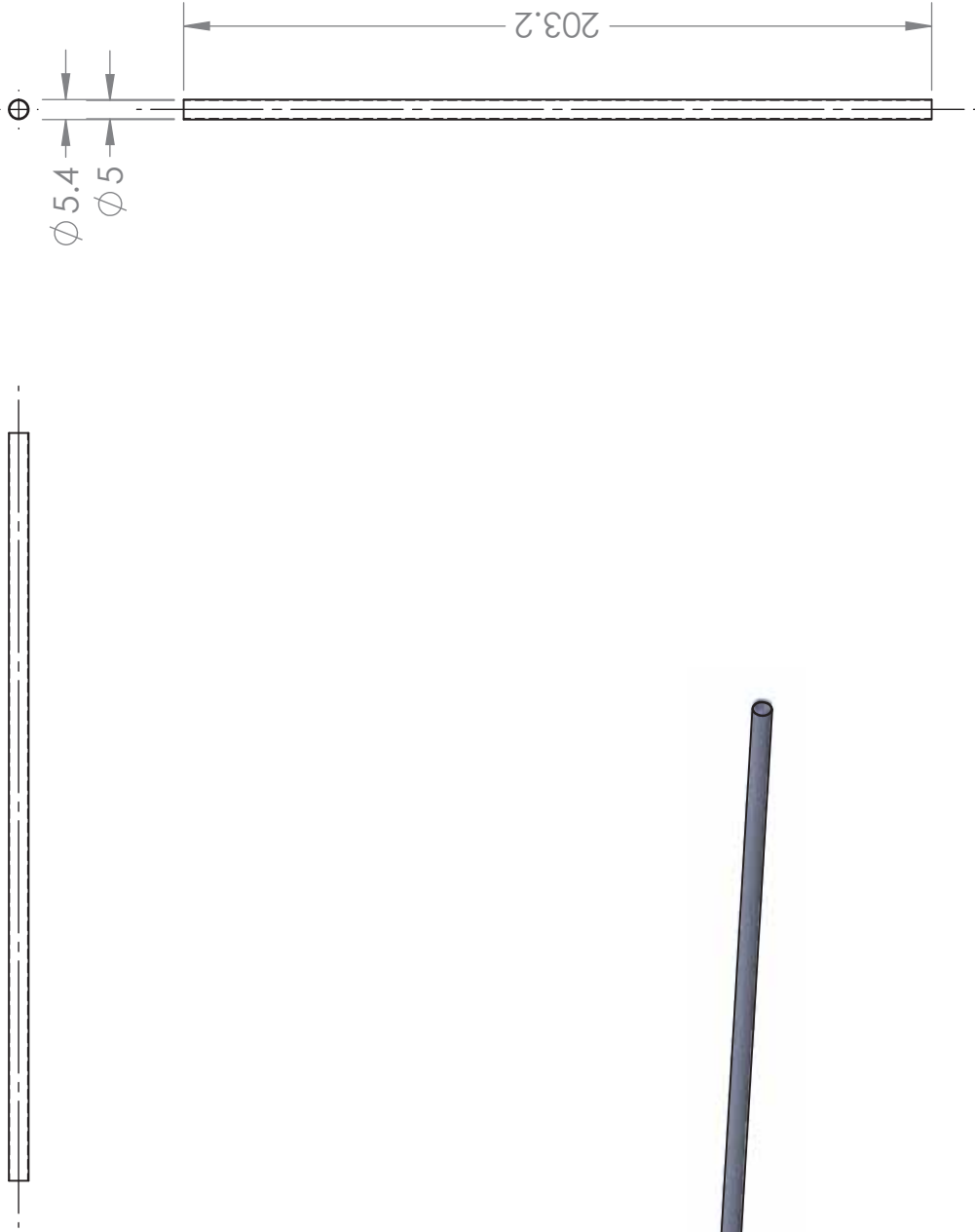
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION : DISPENSER TUBE

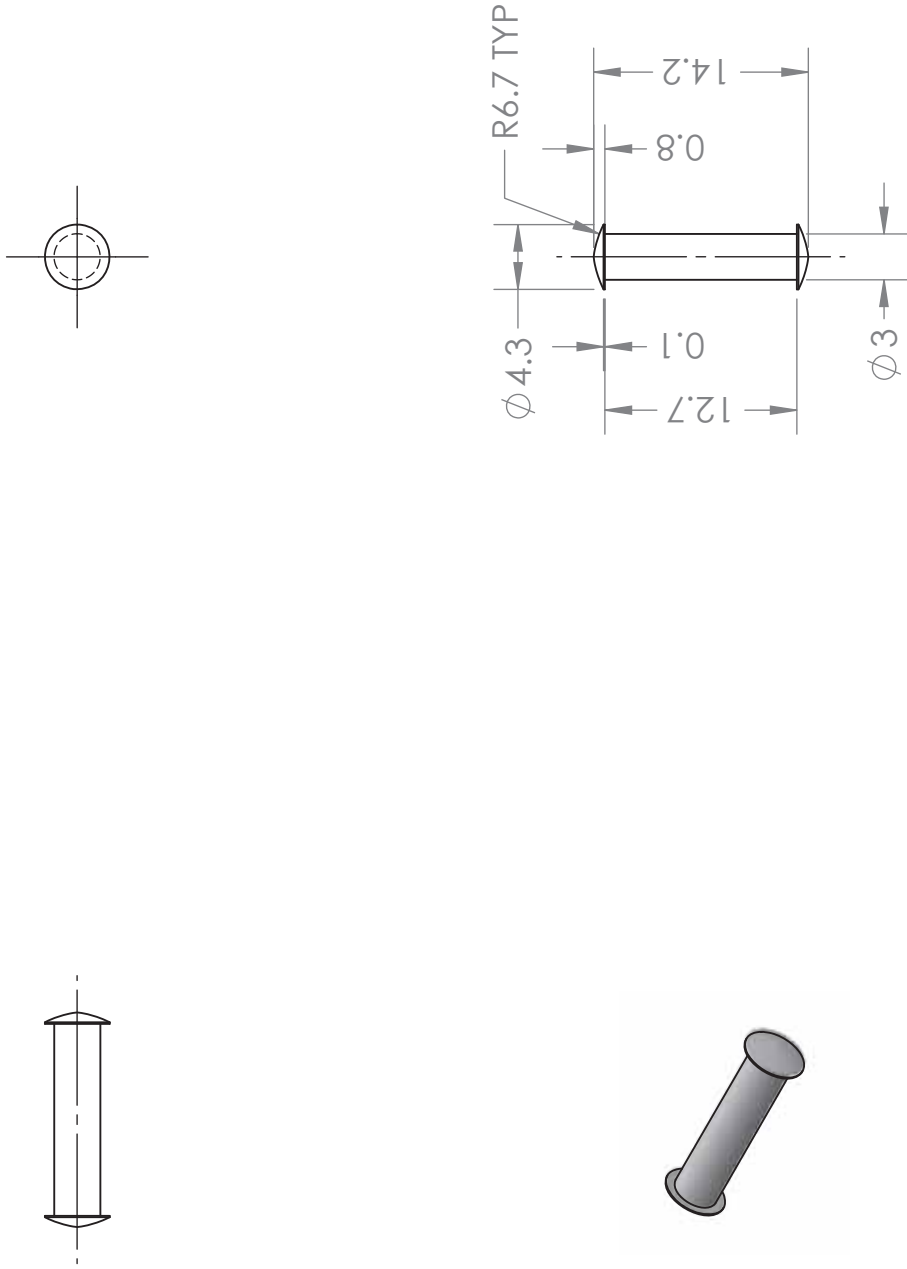
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION : TOP PIN

SHEET

1 OF 1

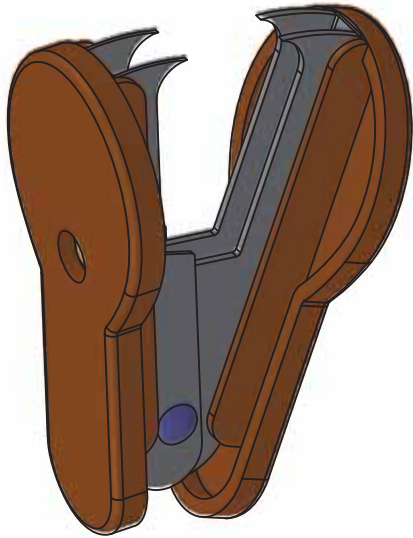
ANGLE OF PROJECTION



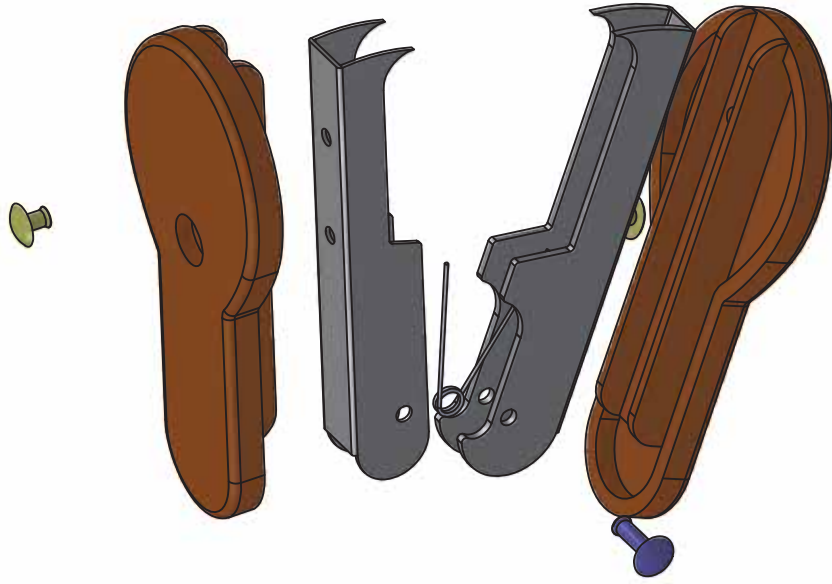
ALL DIMENSIONS ARE IN MM

STAPLER REMOVER





ASSEMBLED VIEW



EXPLODED VIEW

DESCRIPTION. STAPLER REMOVER

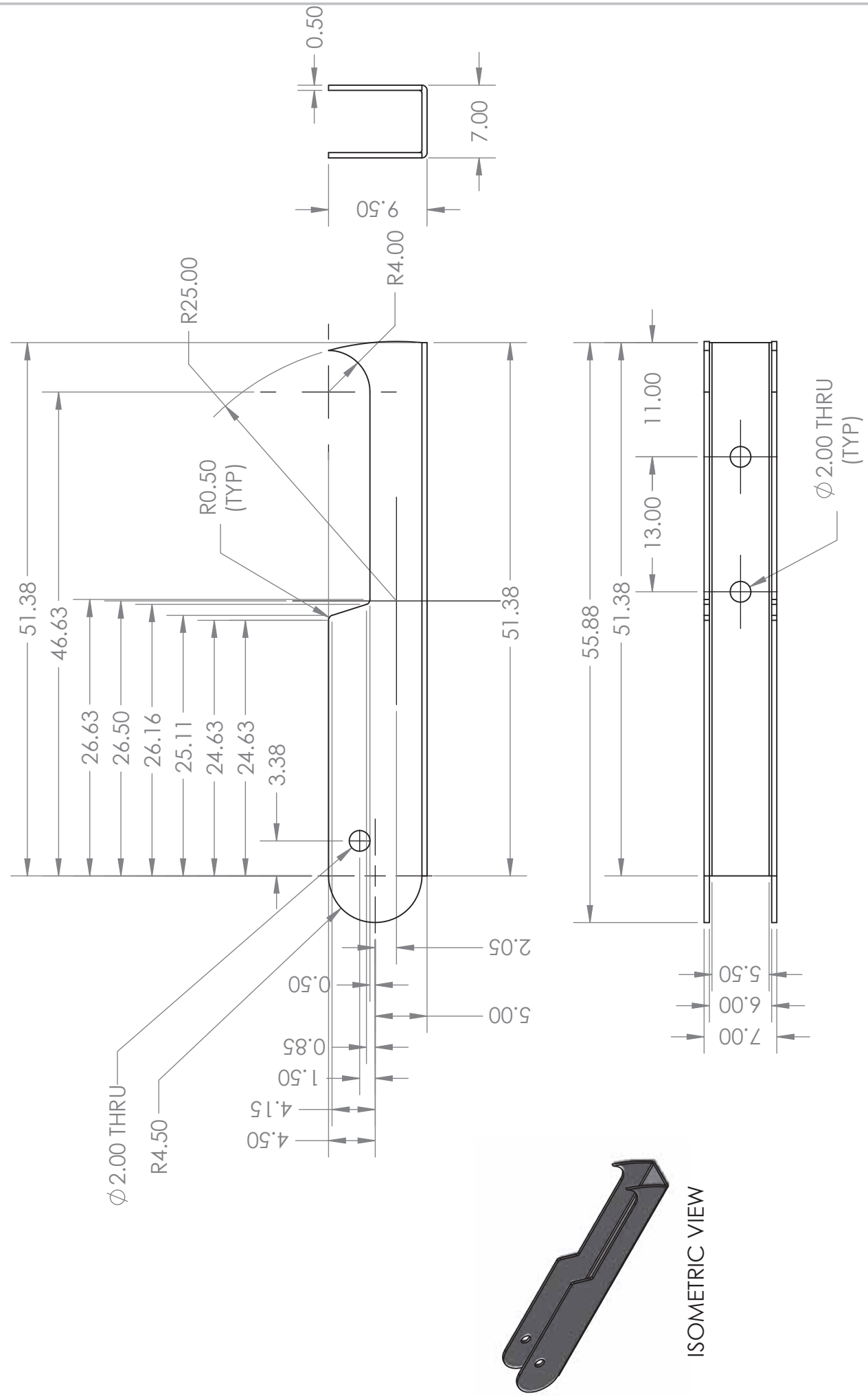
SHEET

1 OF 1

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



DESCRIPTION.

BLADE 1

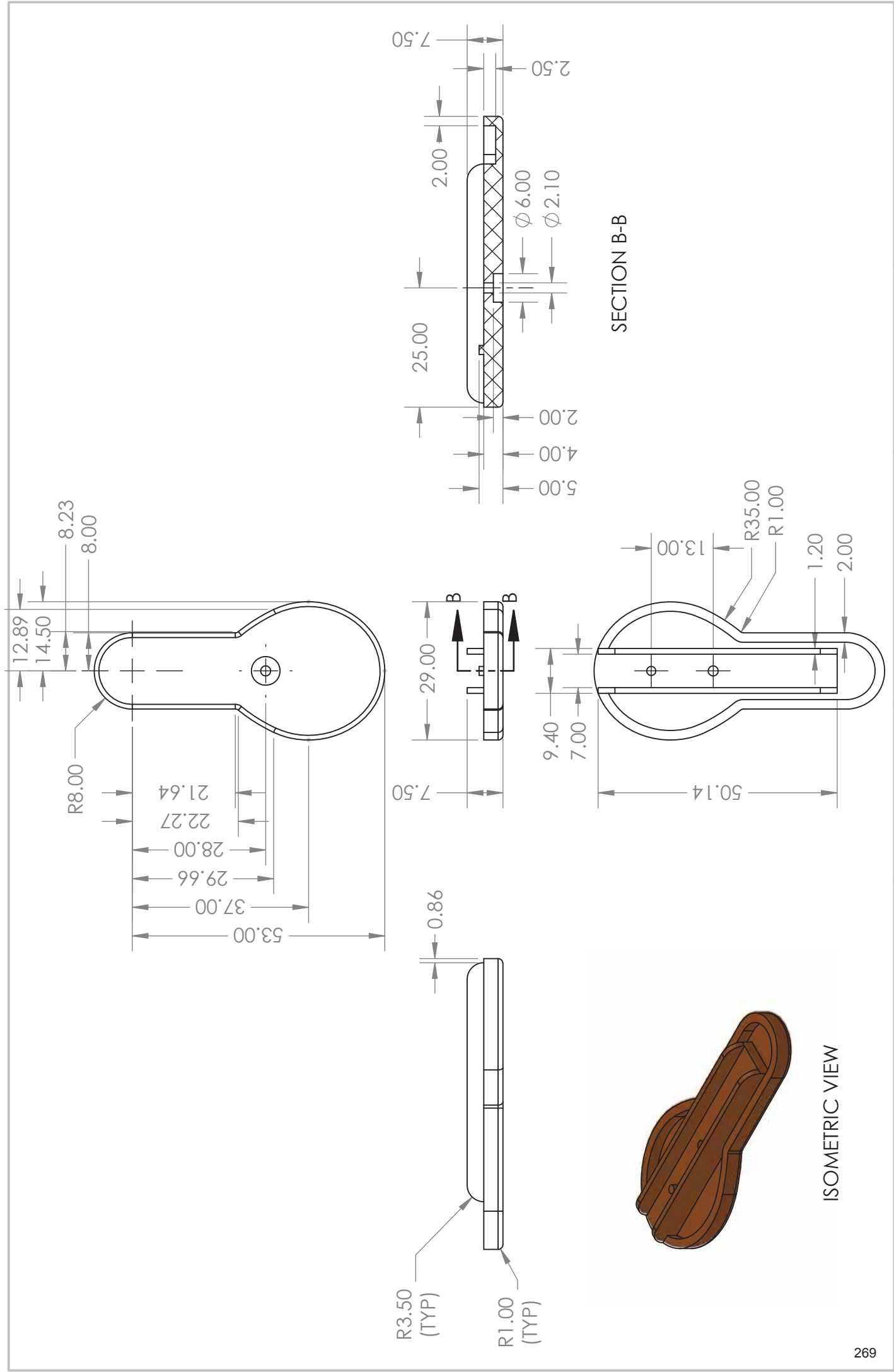
SHEET

1 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

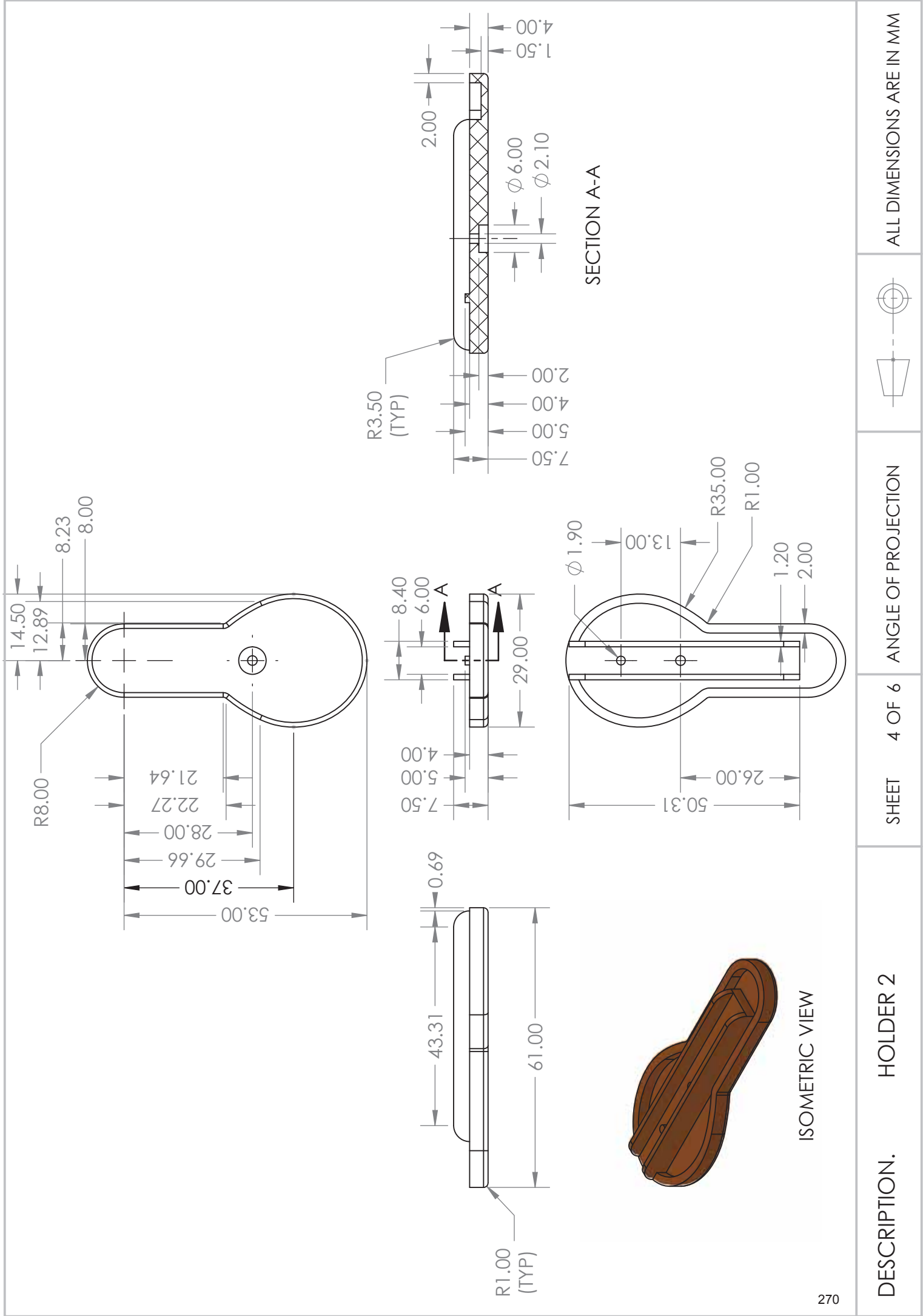


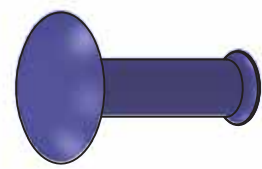
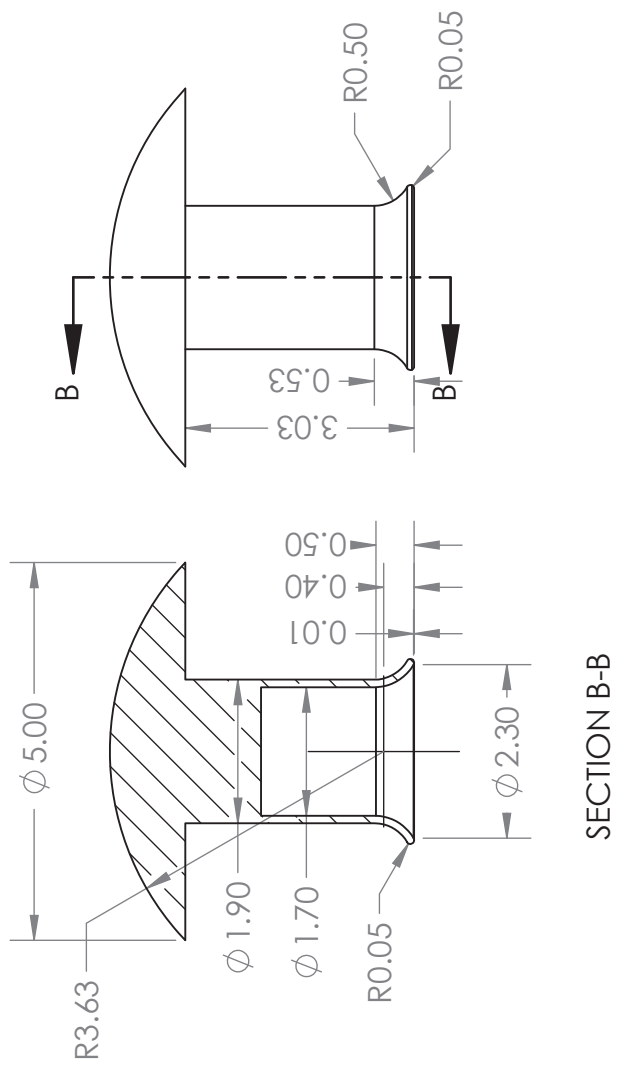
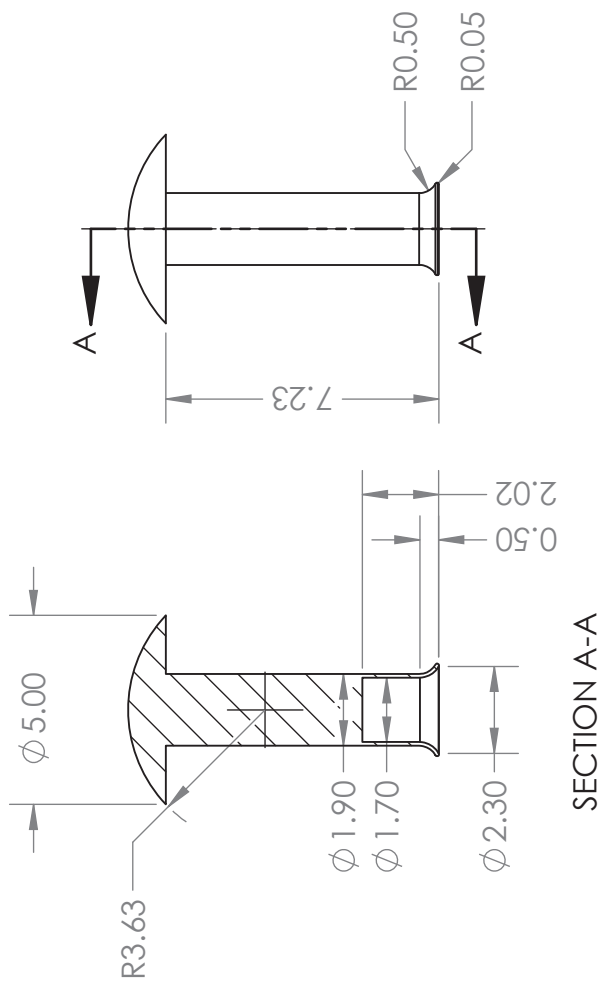
ANGLE OF PROJECTION

SHEET 3 OF 6

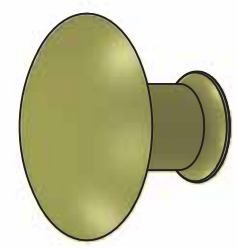
DESCRIPTION. HOLDER 1

ALL DIMENSIONS ARE IN MM





ISOMETRIC VIEW



ISOMETRIC VIEW

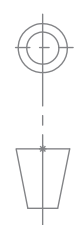
DESCRIPTION.

RIVETS

SHEET

5 OF 61

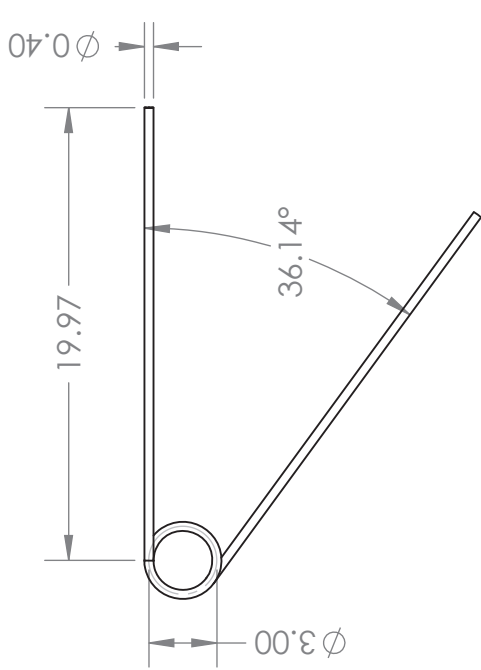
ANGLE OF PROJECTION



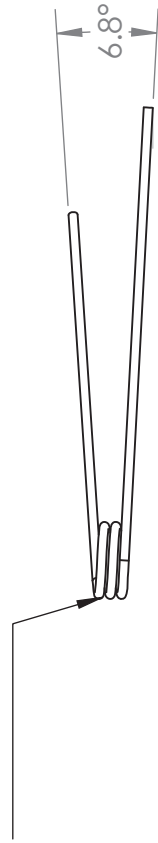
ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



HELIX
CONSTANT PITCH-0.5MM
REV-2.4



DESCRIPTION.

SPRING

SHEET

6 OF 6

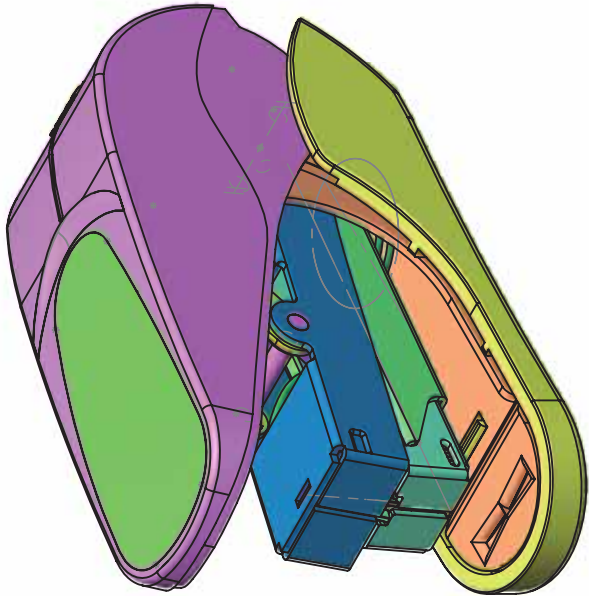
ANGLE OF PROJECTION



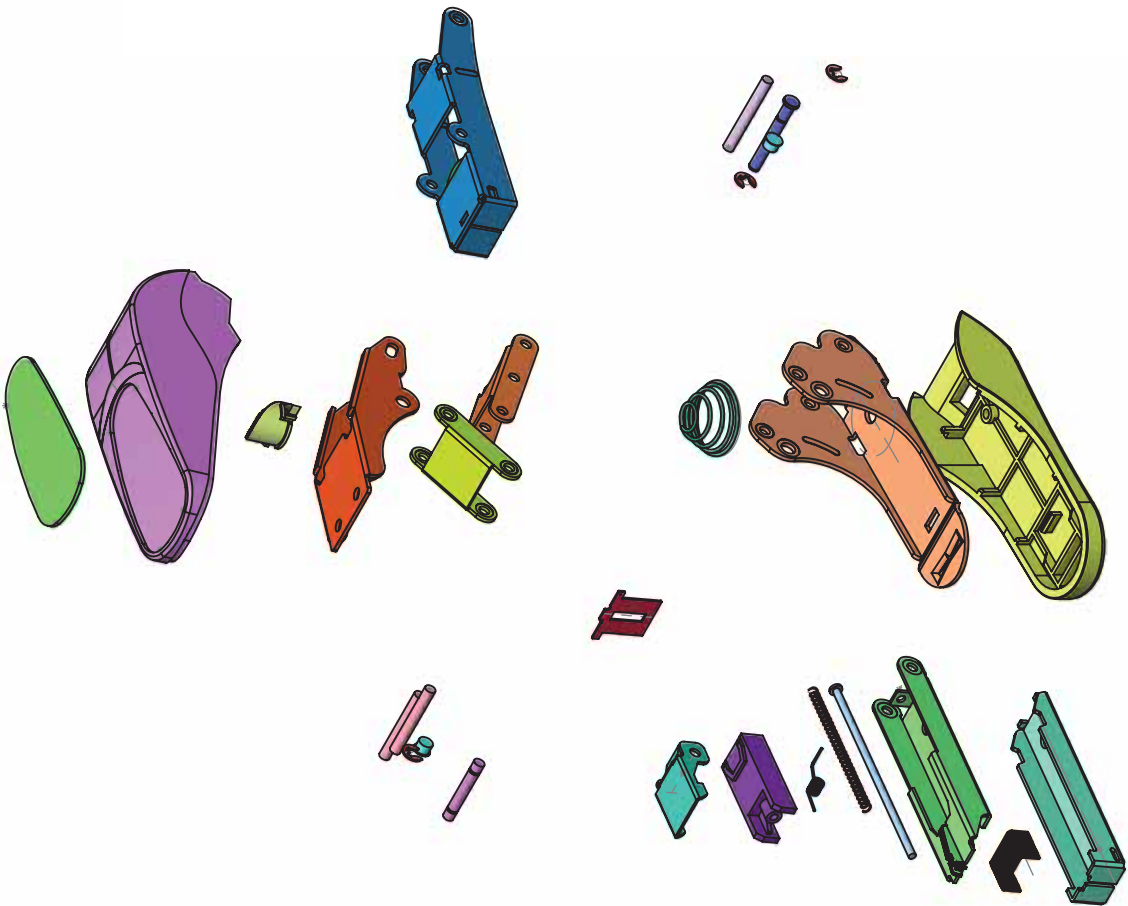
ALL DIMENSIONS ARE IN MM

MINI STAPLER





ISOMETRIC VIEW



EXPLODED VIEW

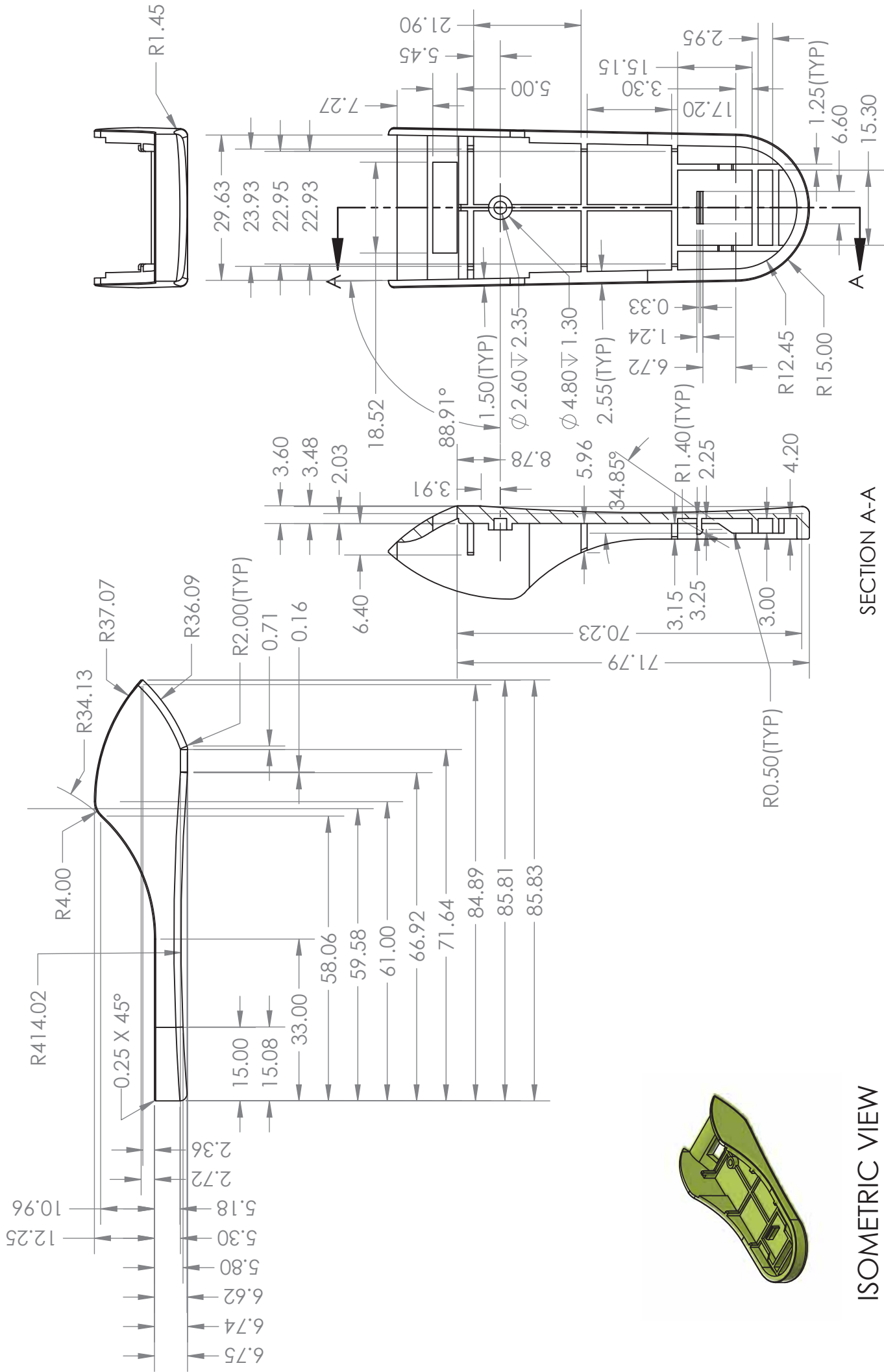
DESCRIPTION. Stapler - Exploded

SHEET 1 OF 1

ANGLE OF PROJECTION

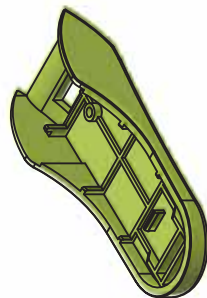


ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

SECTION A-A



DESCRIPTION.

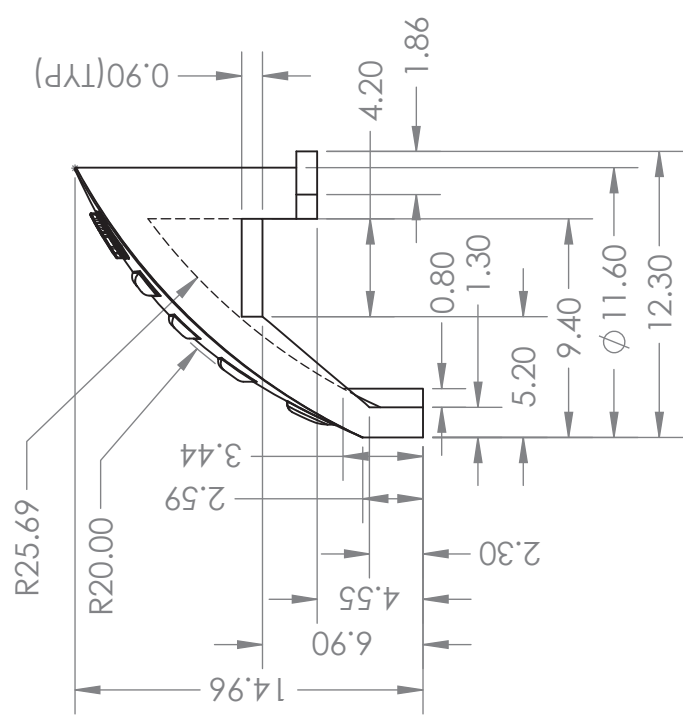
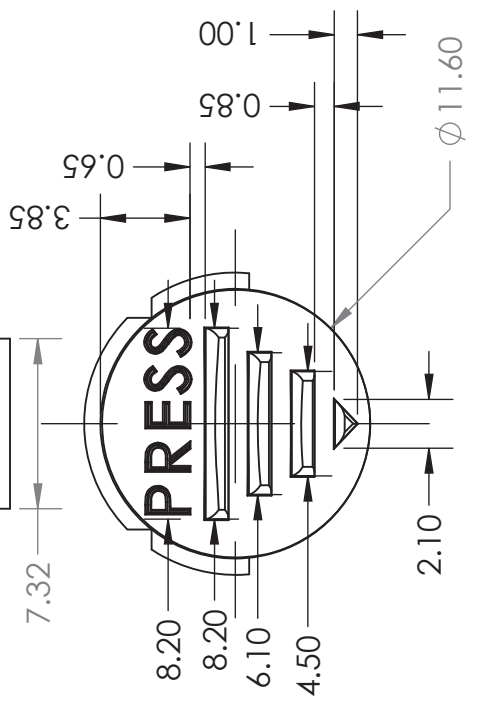
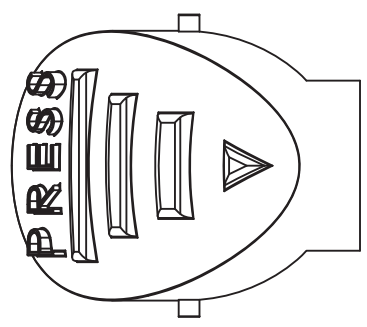
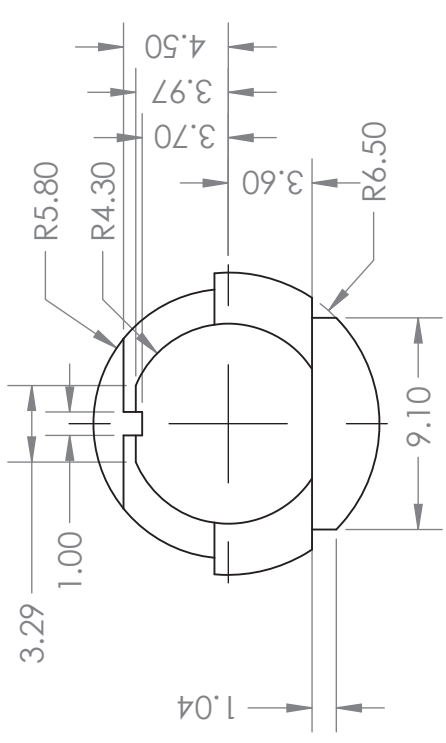
Base Plastic

SHEET 2 OF 17

ANGLE OF PROJECTION

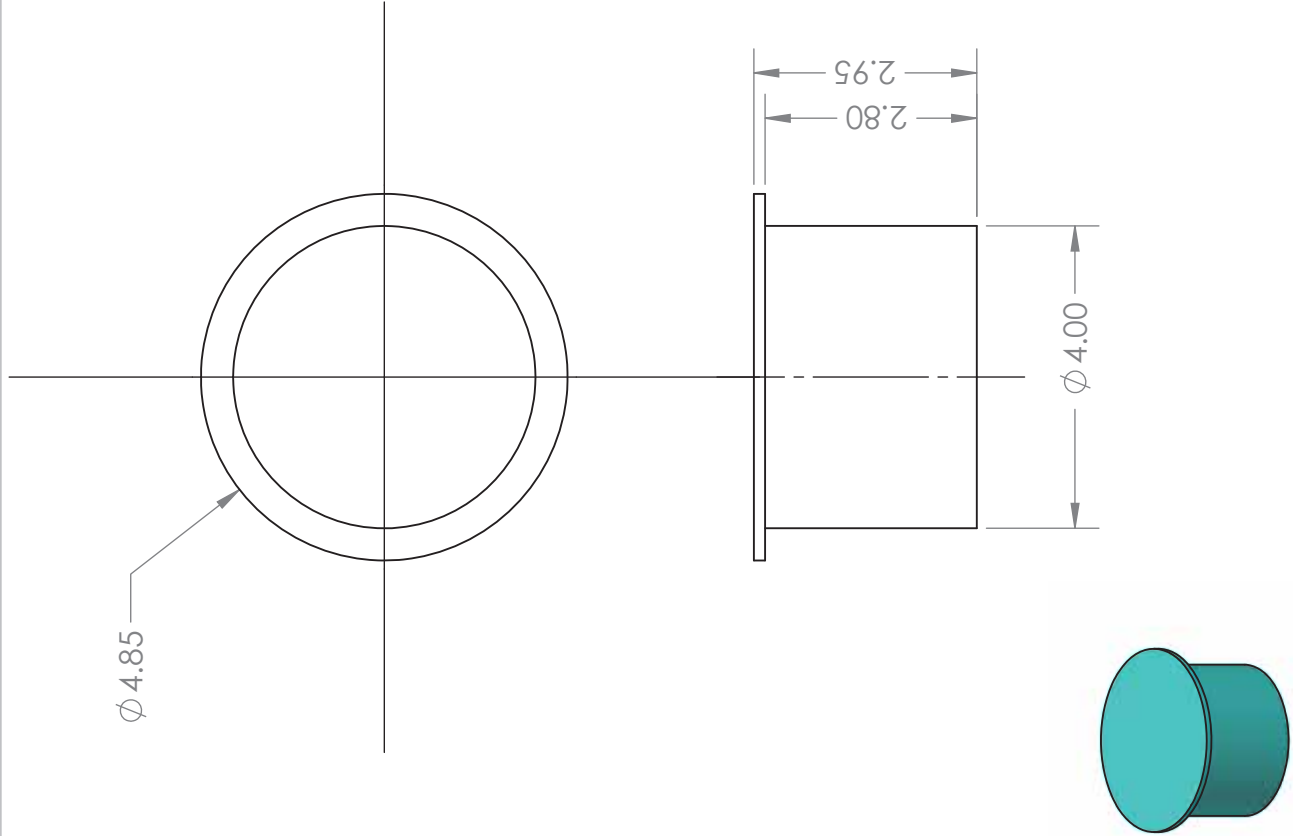


ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION.	Button	SHEET 3 OF 17	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

ALL DIMENSIONS ARE IN MM

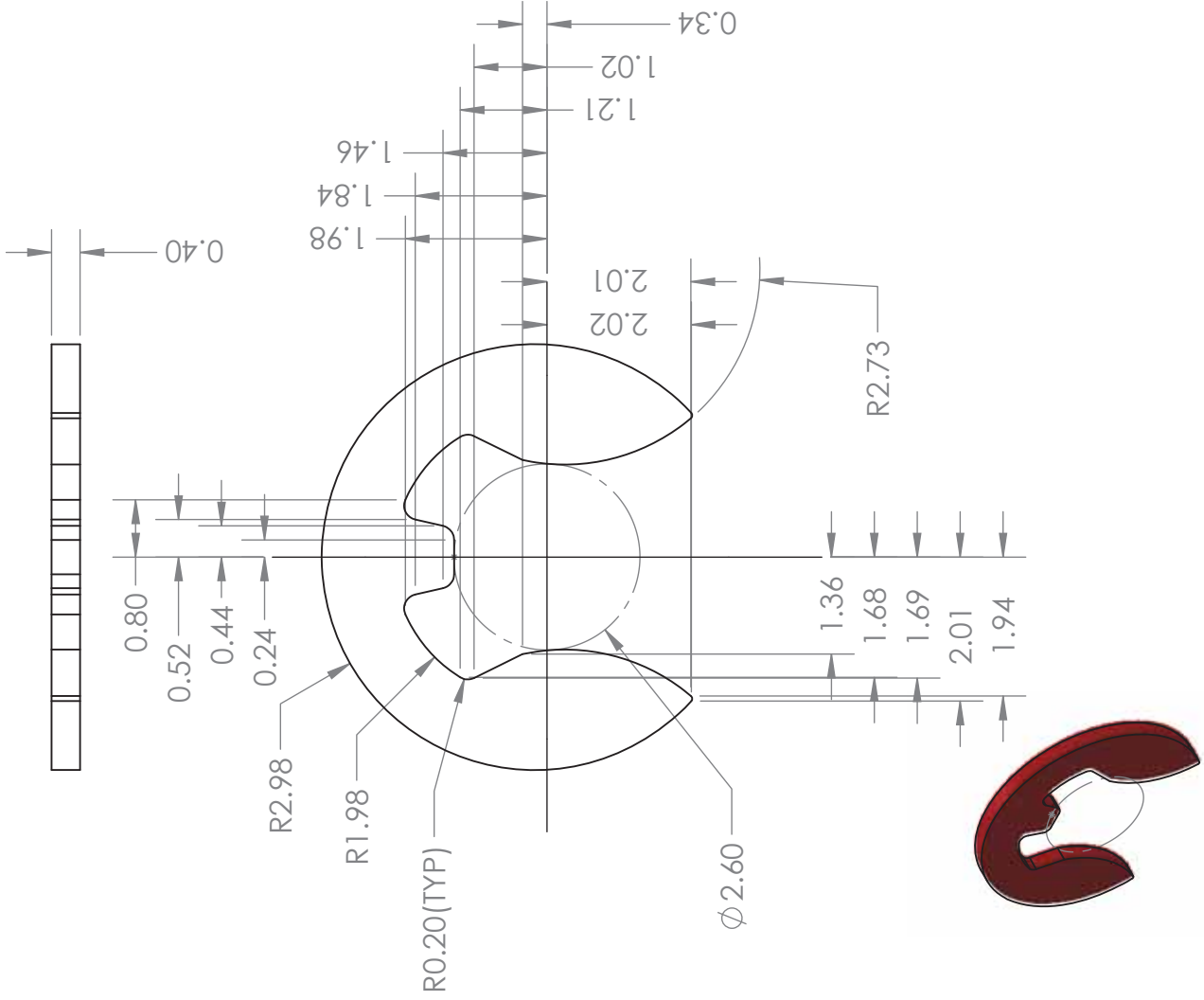


ANGLE OF PROJECTION

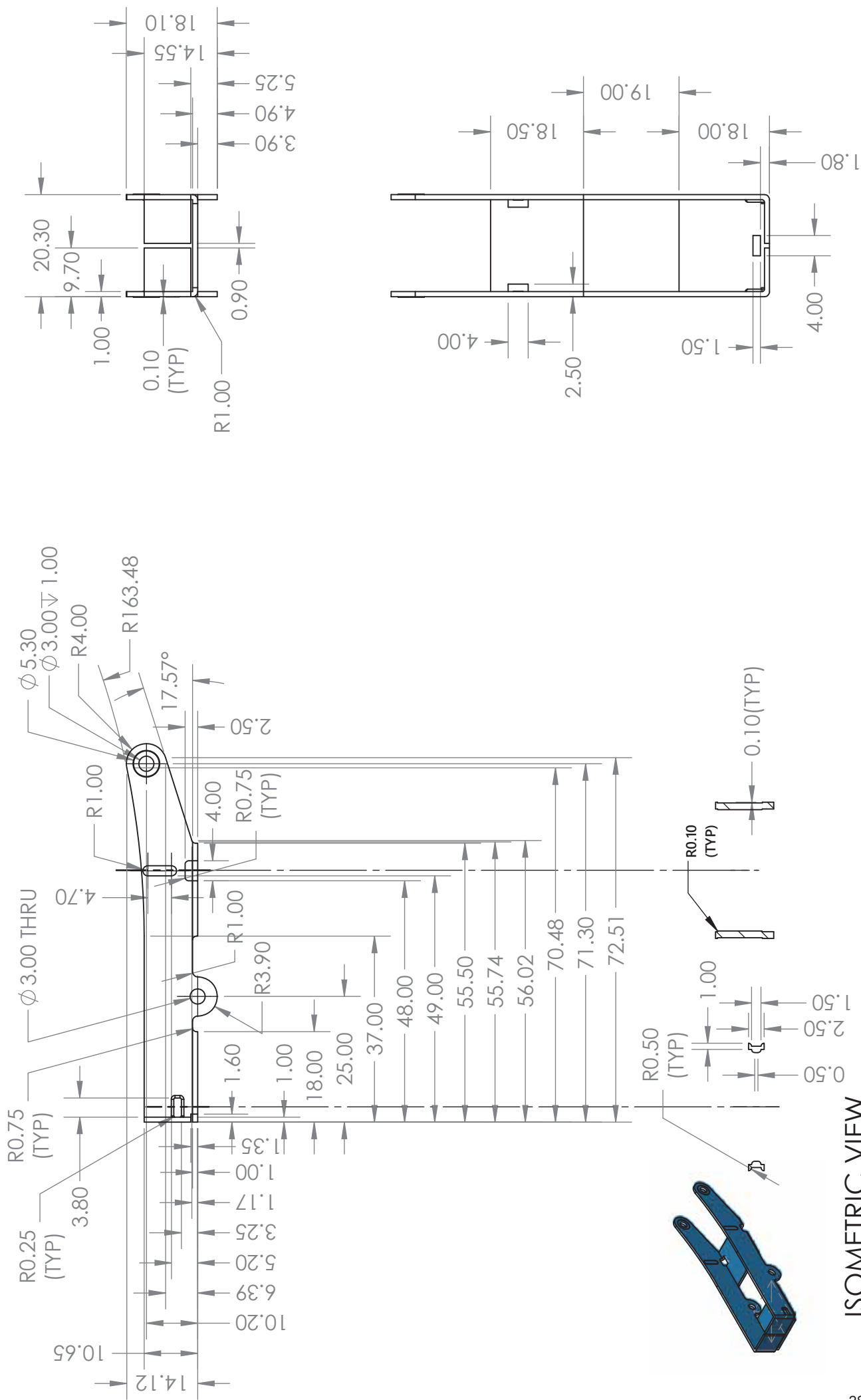
SHEET 14 OF 17

Clip & Cap

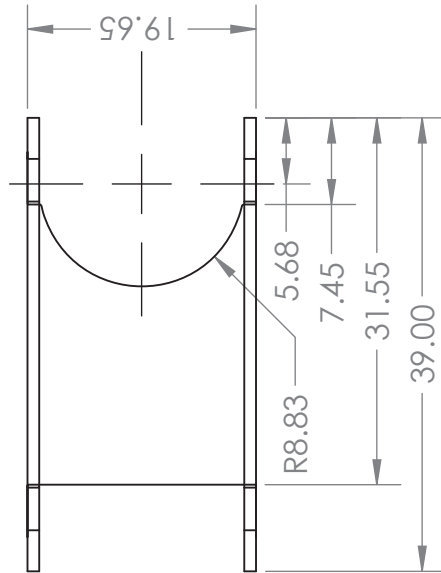
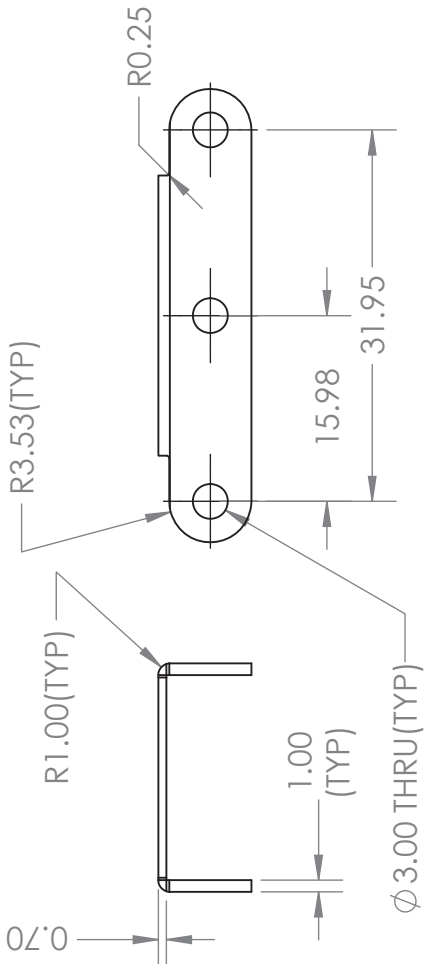
DESCRIPTION:



ISOMETRIC VIEW



DESCRIPTION.	Guide Rail	SHEET 13 OF 17	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

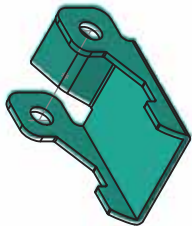
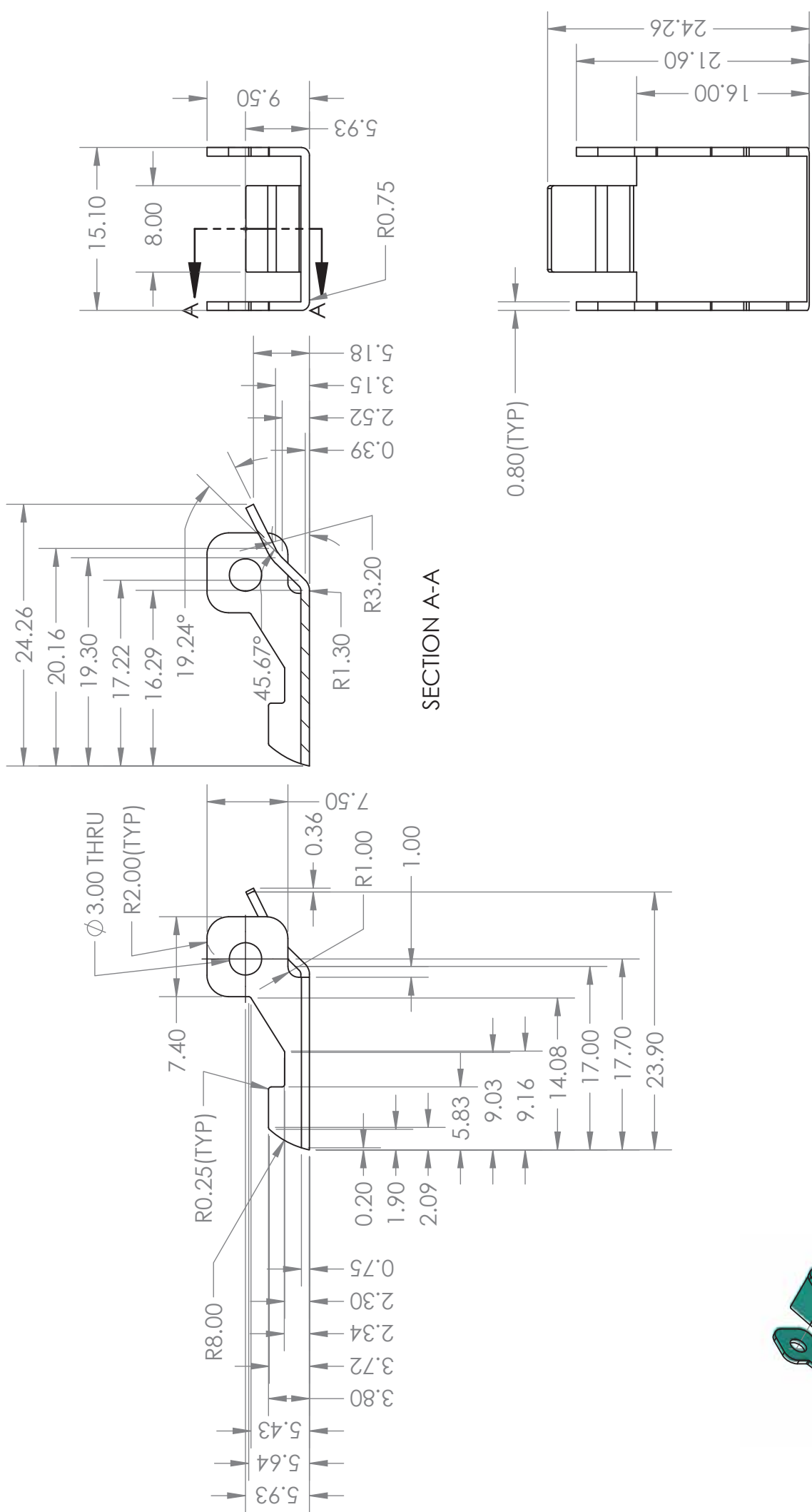
DESCRIPTION. Links

SHEET 8 OF 17

ANGLE OF PROJECTION

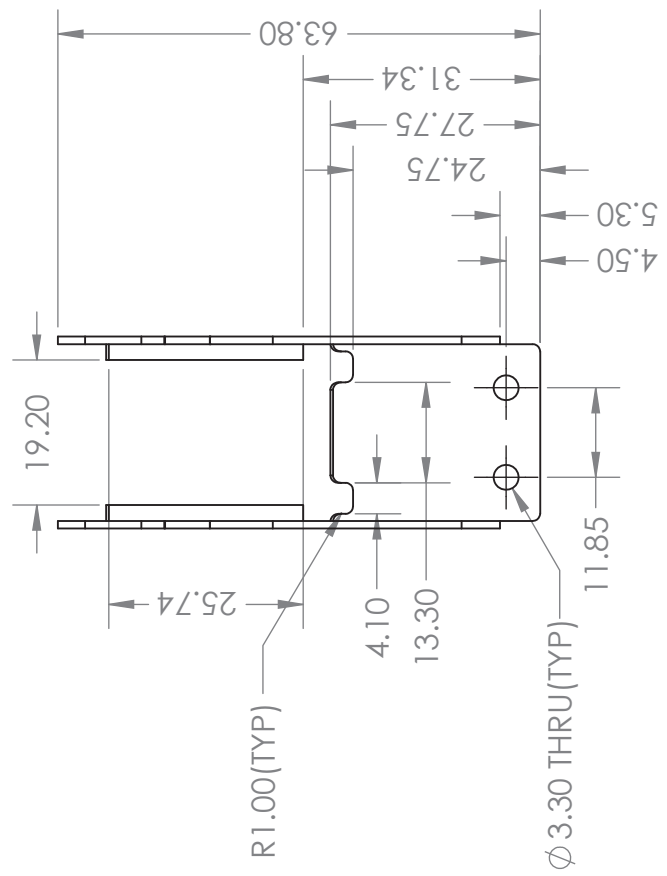
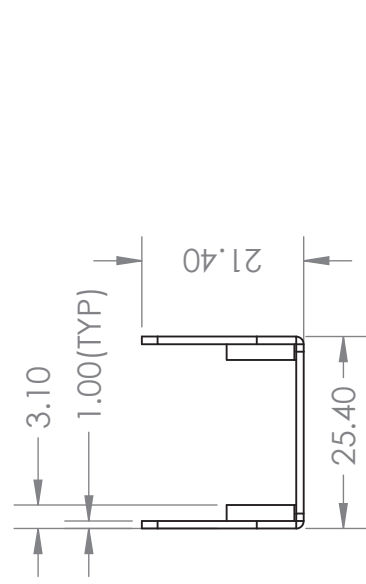
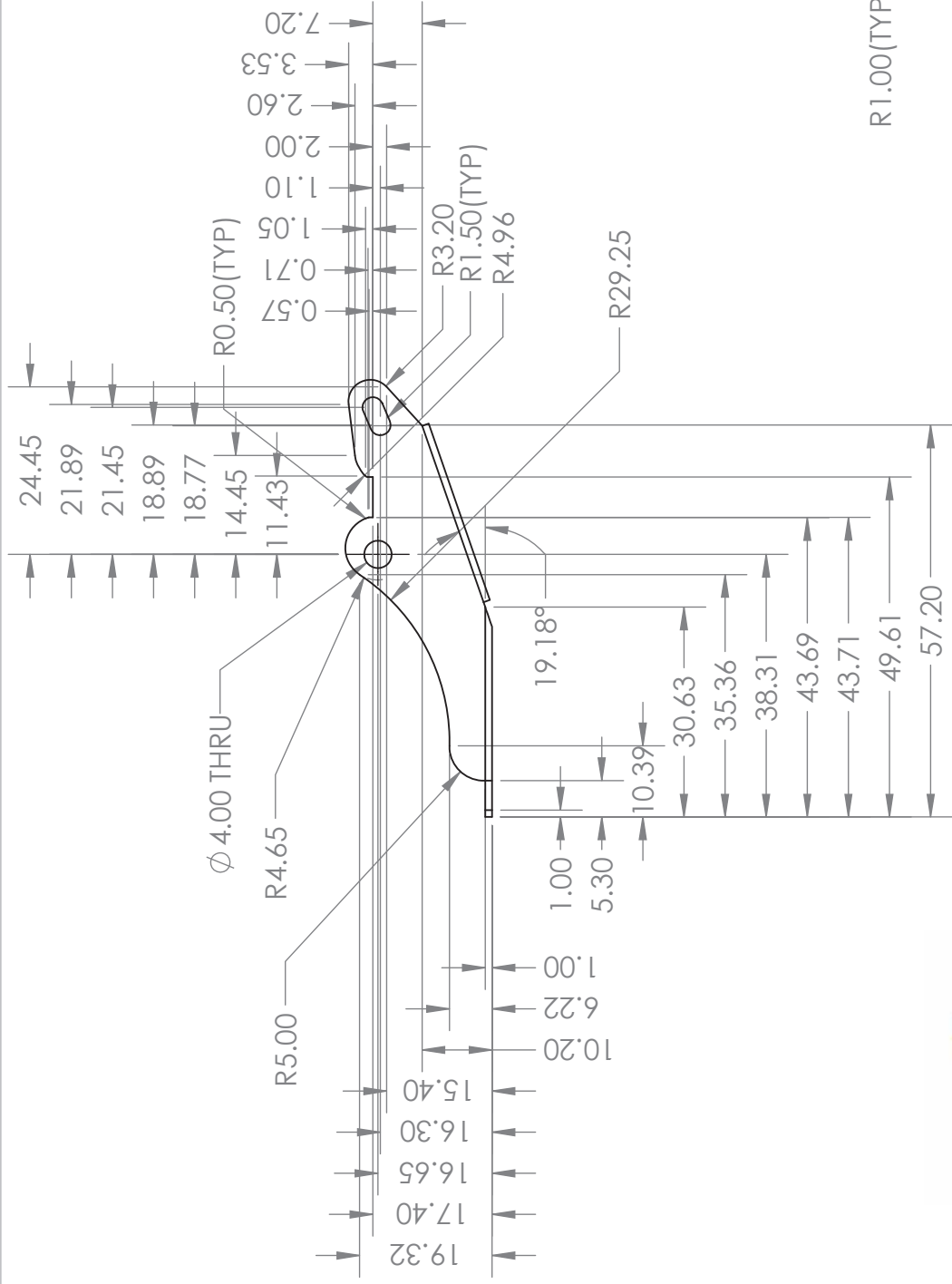


ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

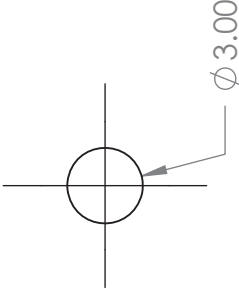
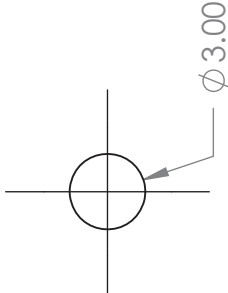
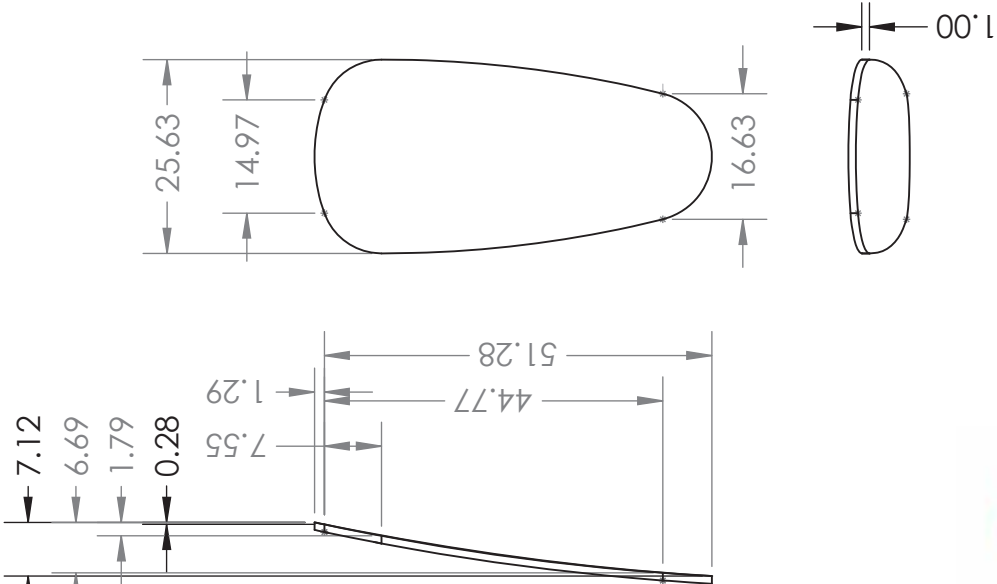
DESCRIPTION:	Lock	SHEET 10 OF 17	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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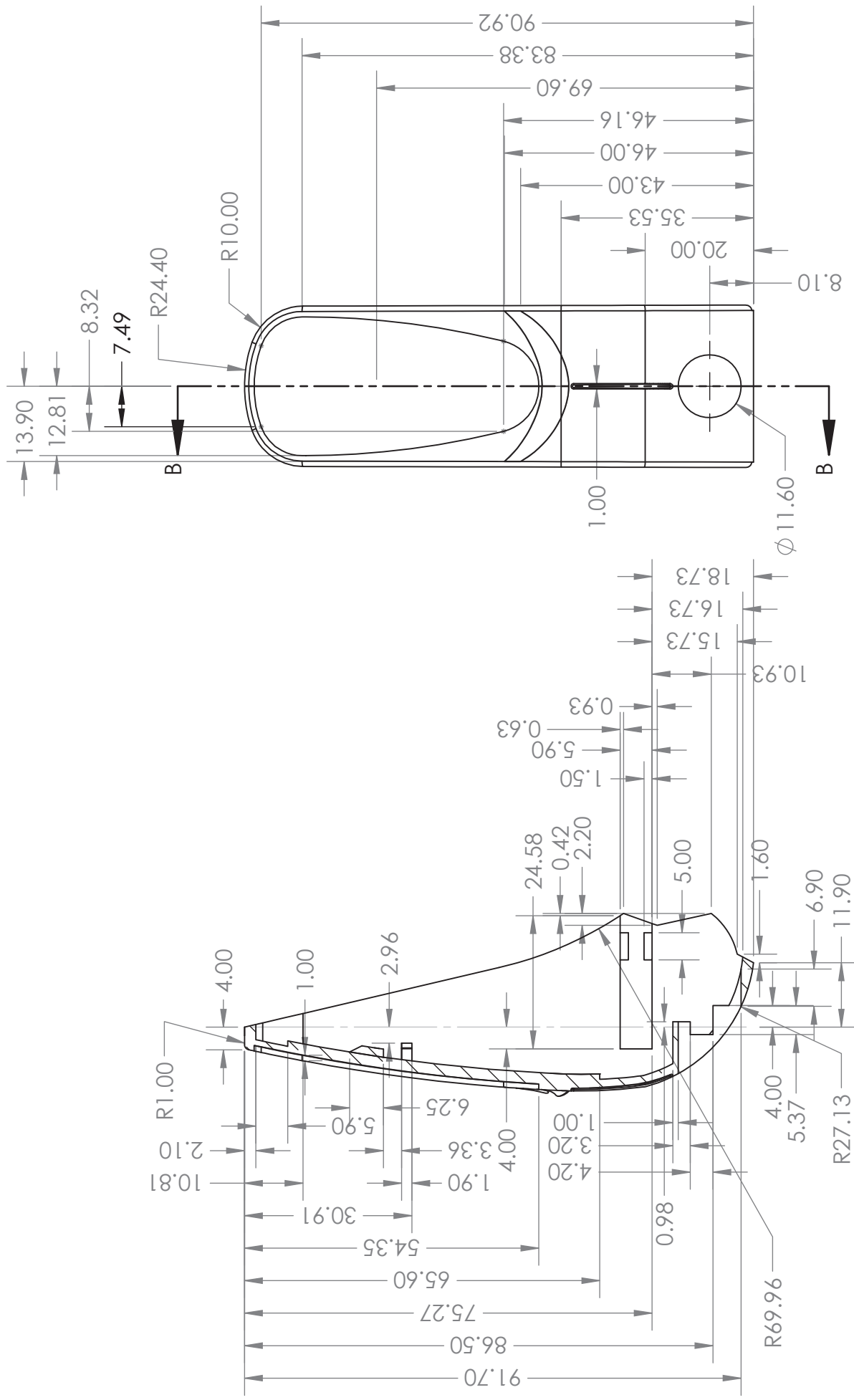


ISOMETRIC VIEW

DESCRIPTION.	SHEET 16 OF 17	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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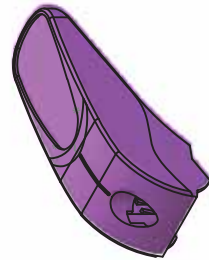
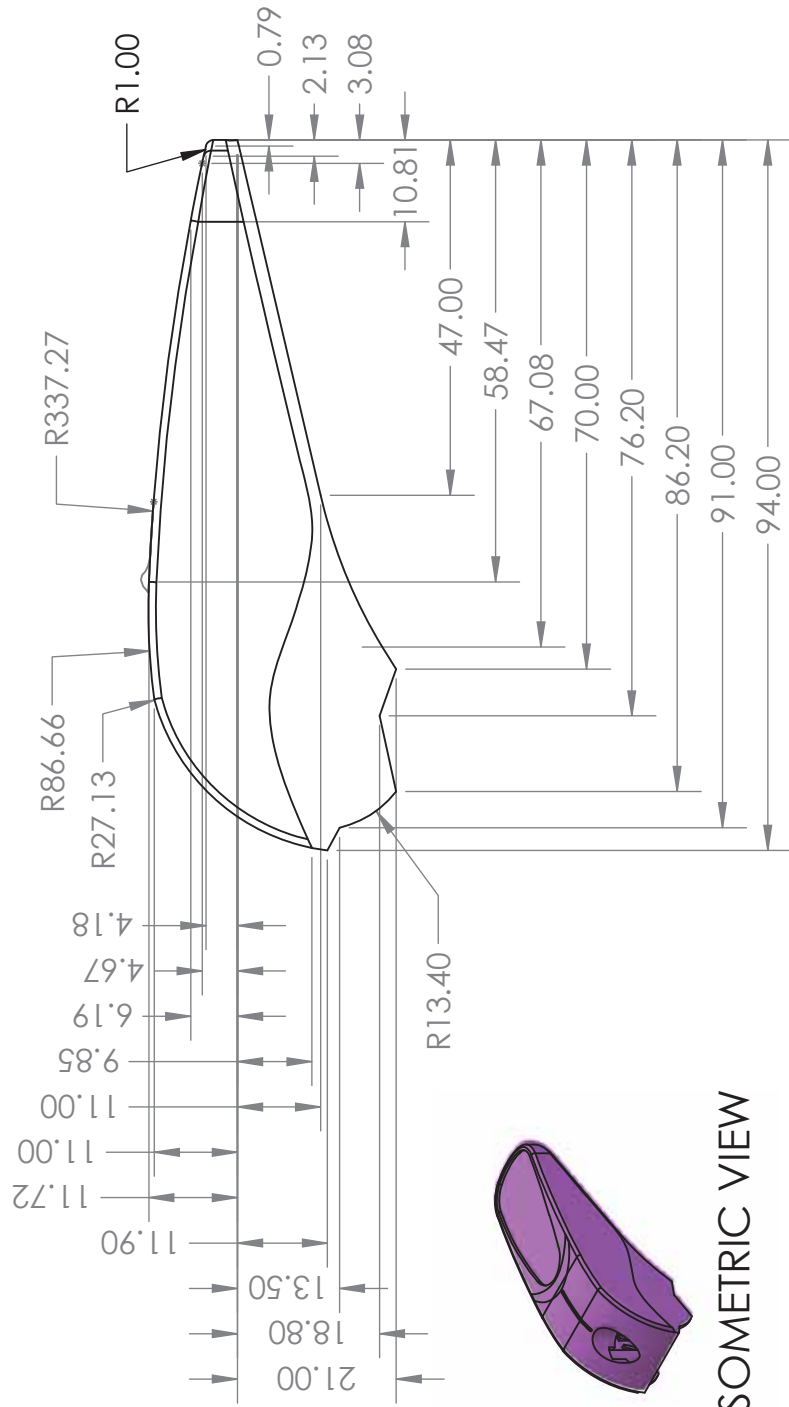
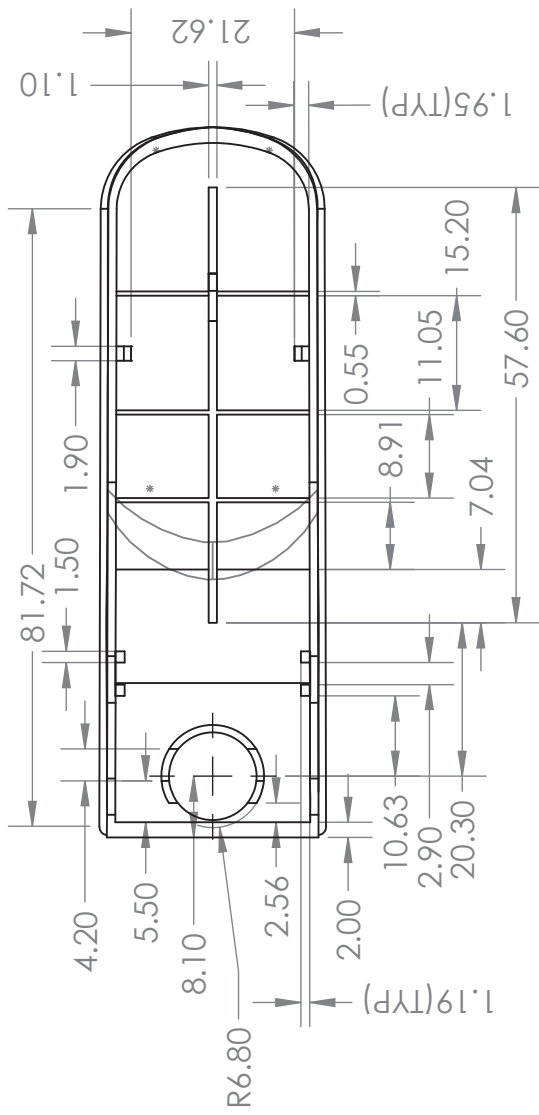
Metal Clip

  ISOMETRIC VIEW	  ISOMETRIC VIEW	  ISOMETRIC VIEW	DESCRIPTION. Pins	SHEET 7 OF 17 ANGLE OF PROJECTION	 ALL DIMENSIONS ARE IN MM
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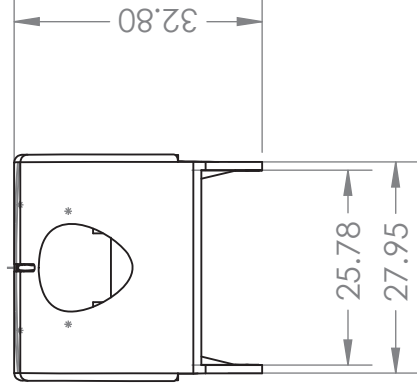


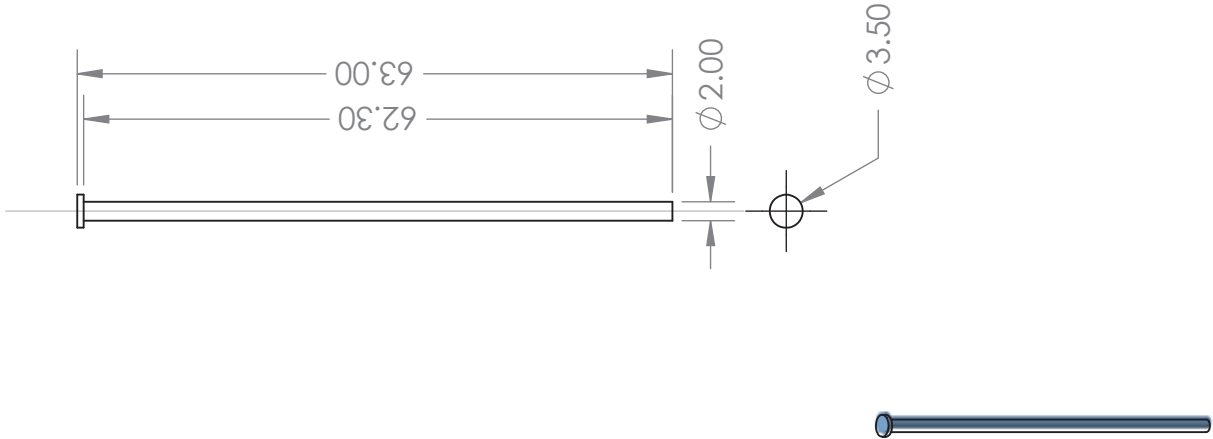
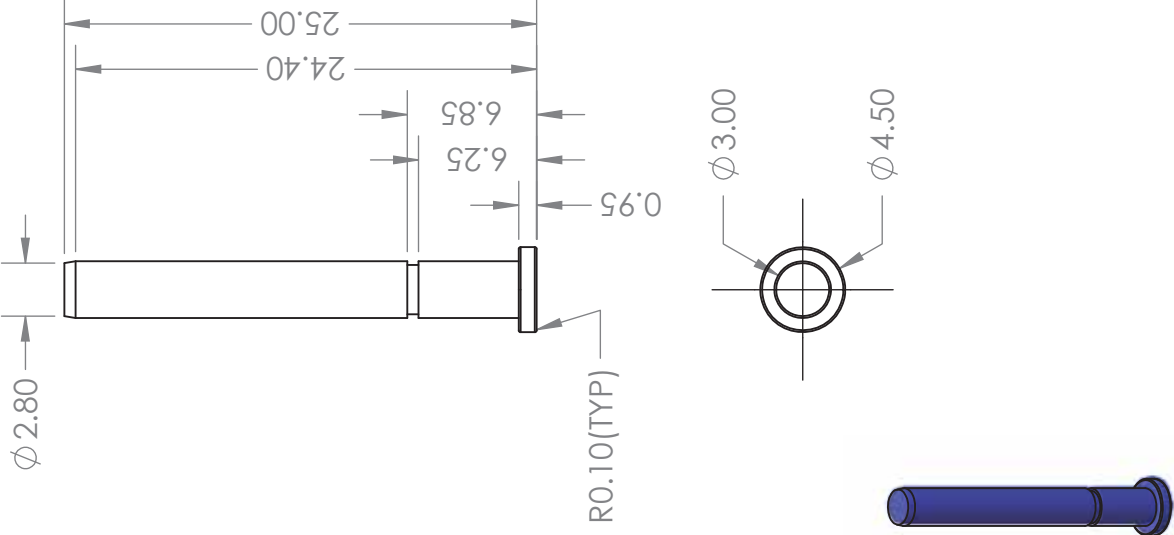
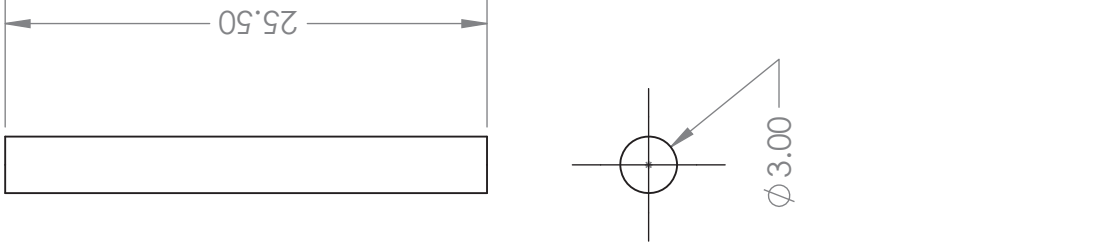
SECTION B-B

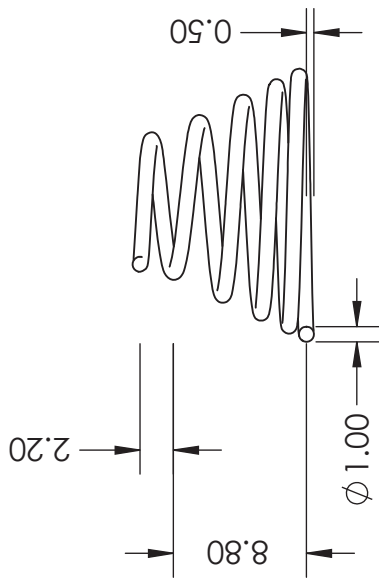
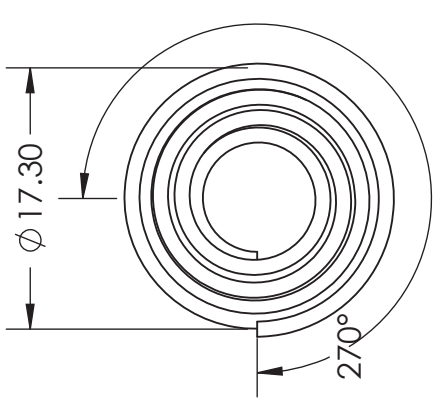
DESCRIPTION.	Plastic Cover 2	SHEET 17-a OF 17	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



 ISOMETRIC VIEW	 ISOMETRIC VIEW	 ISOMETRIC VIEW	DESCRIPTION. Rivets	SHEET 6 OF 17 ANGLE OF PROJECTION	 ALL DIMENSIONS ARE IN MM
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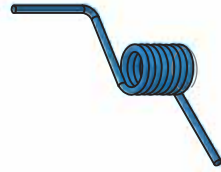
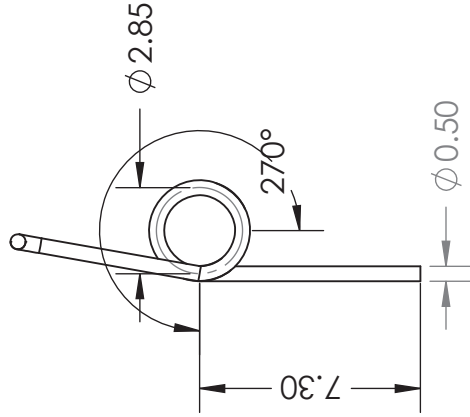
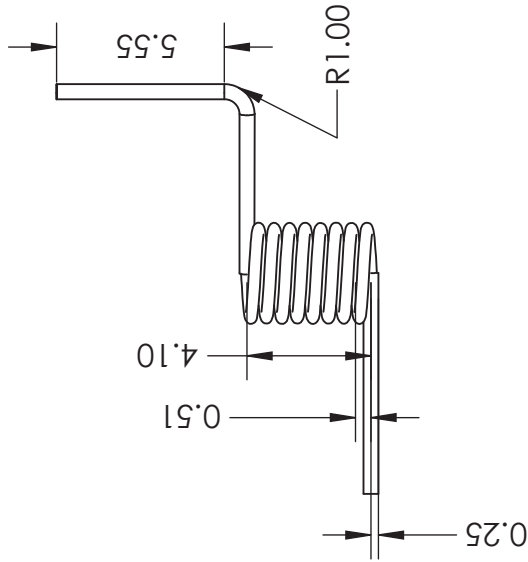


NOTES

P	Rev	H	Dia
0.8	0	0	17.3
3.6	4	8.8	9.1
0.8	5	11	8.05

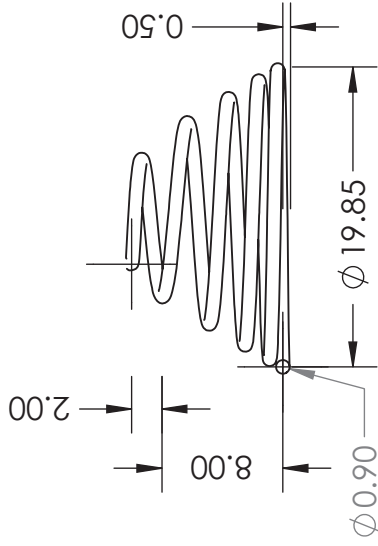
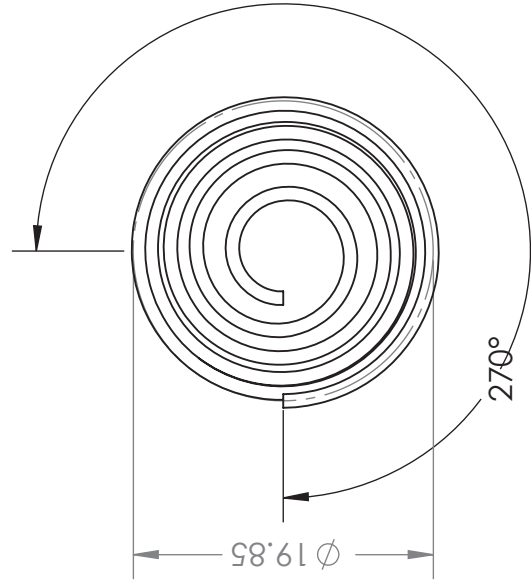


ISOMETRIC VIEW



ISOMETRIC VIEW





NOTES

P	Rev	H	Dia
0.5	0	0	19.85
3.5	4	8	10.5
0.5	5	10	6.25

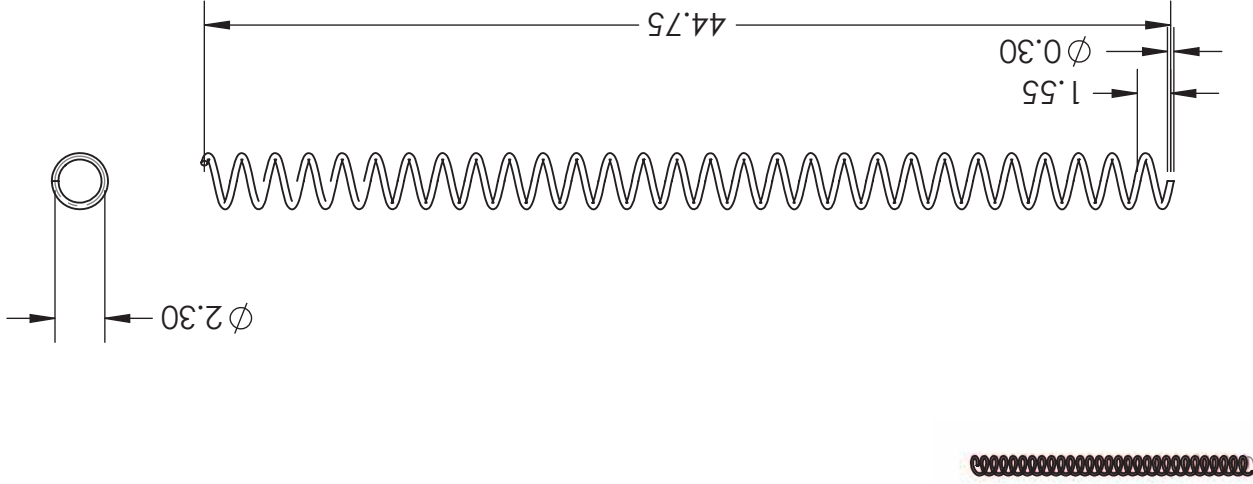


ISOMETRIC VIEW

DESCRIPTION.

Springs

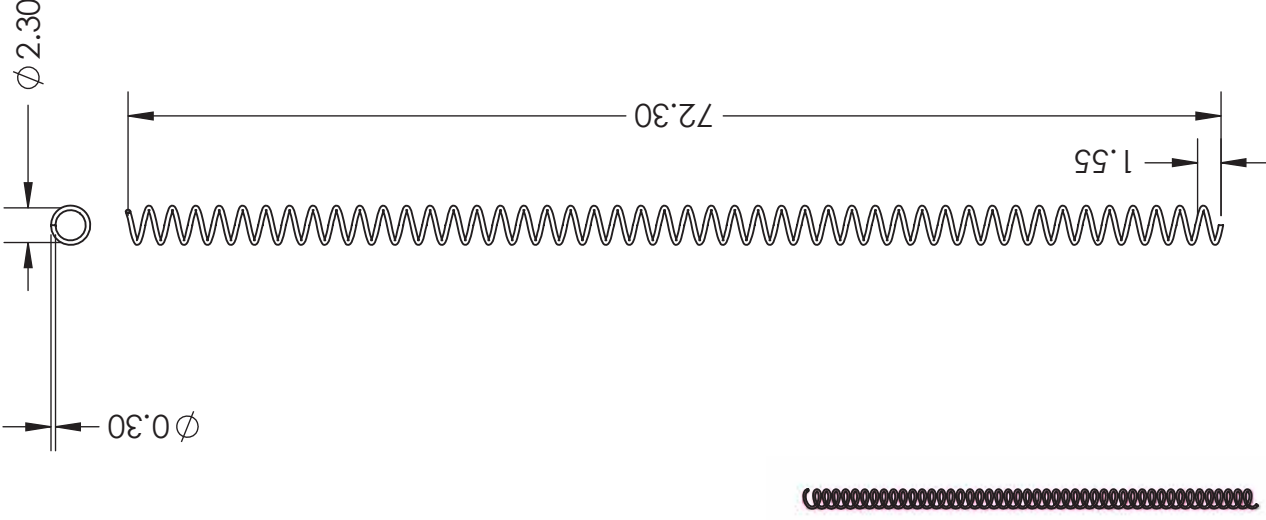
ISOMETRIC VIEW



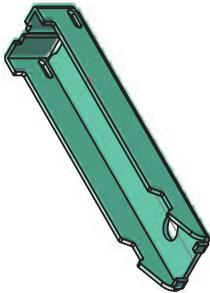
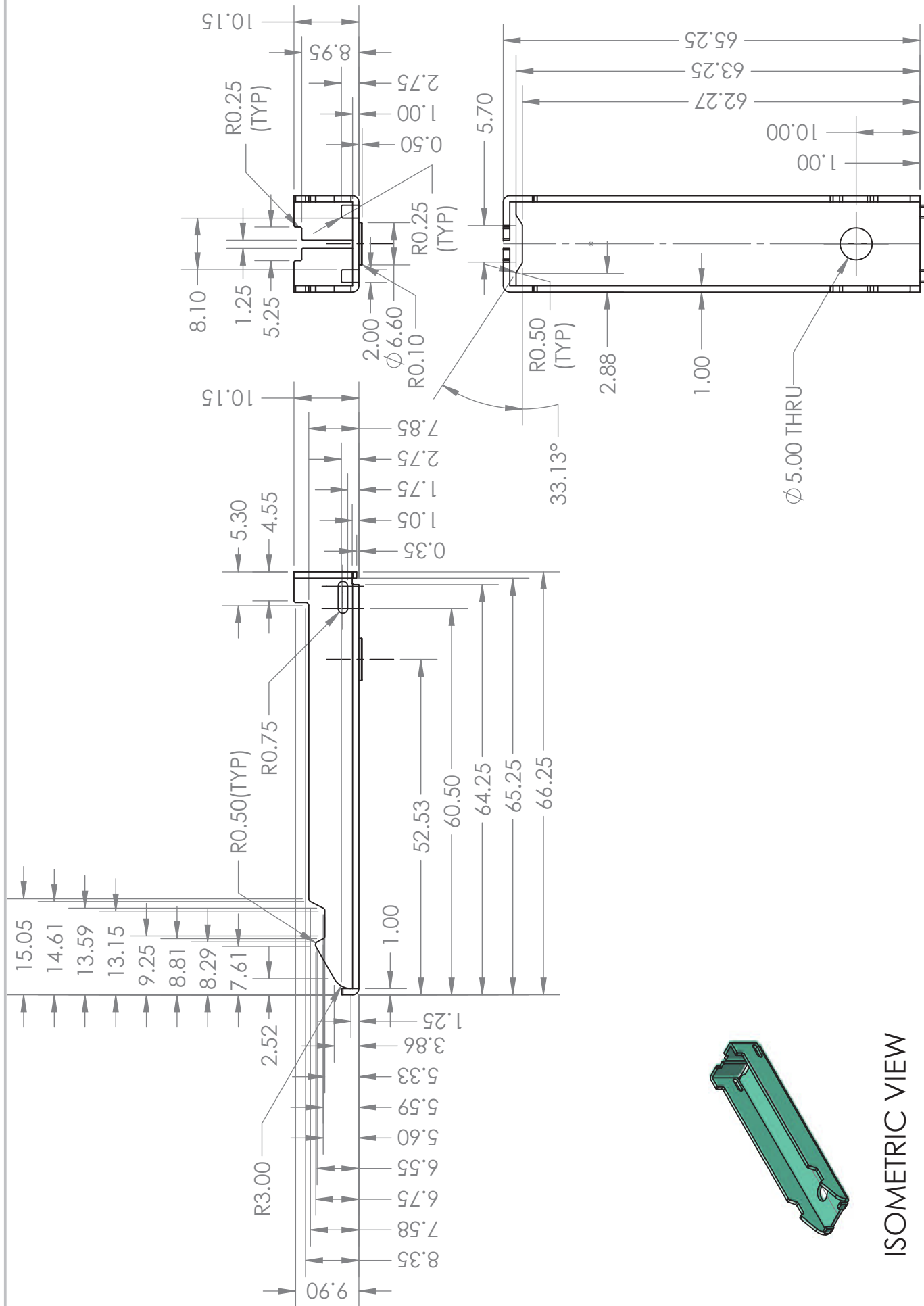
SHEET 11 OF 17

ANGLE OF PROJECTION

ISOMETRIC VIEW



ALL DIMENSIONS ARE IN MM



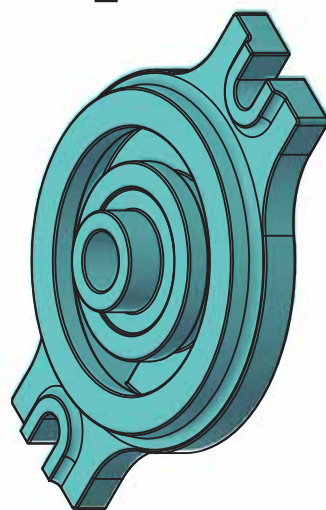
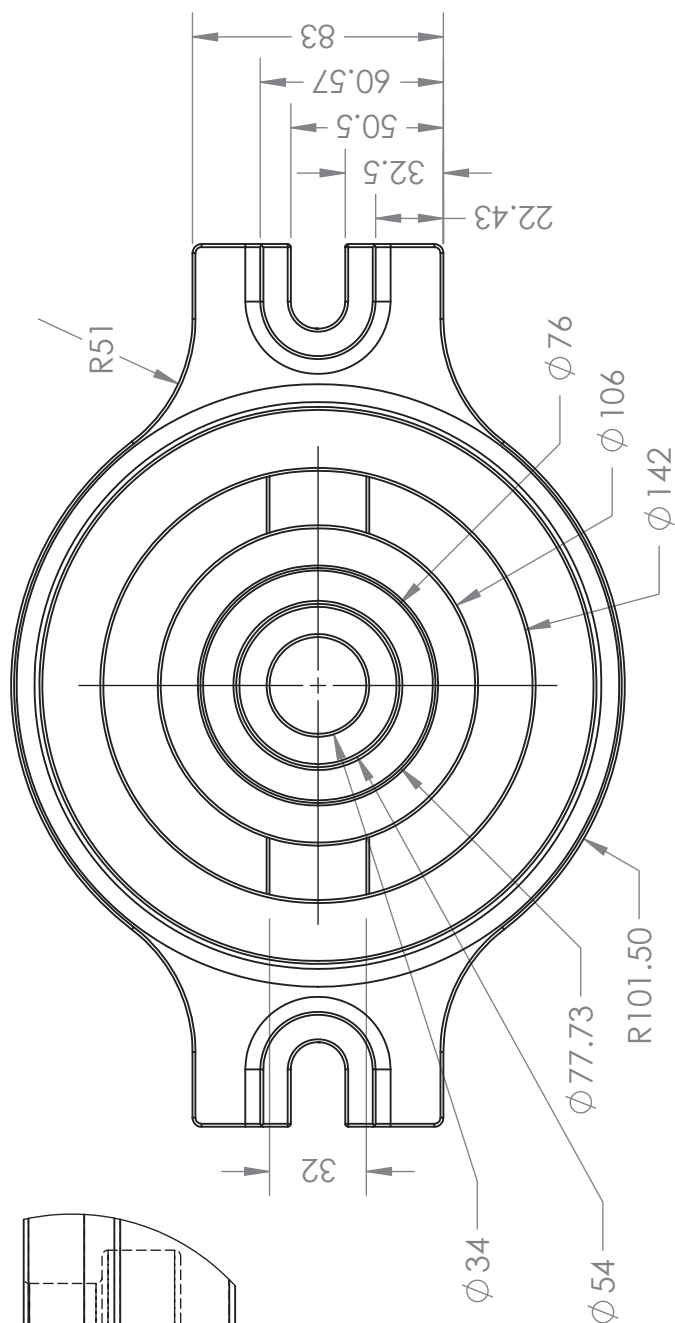
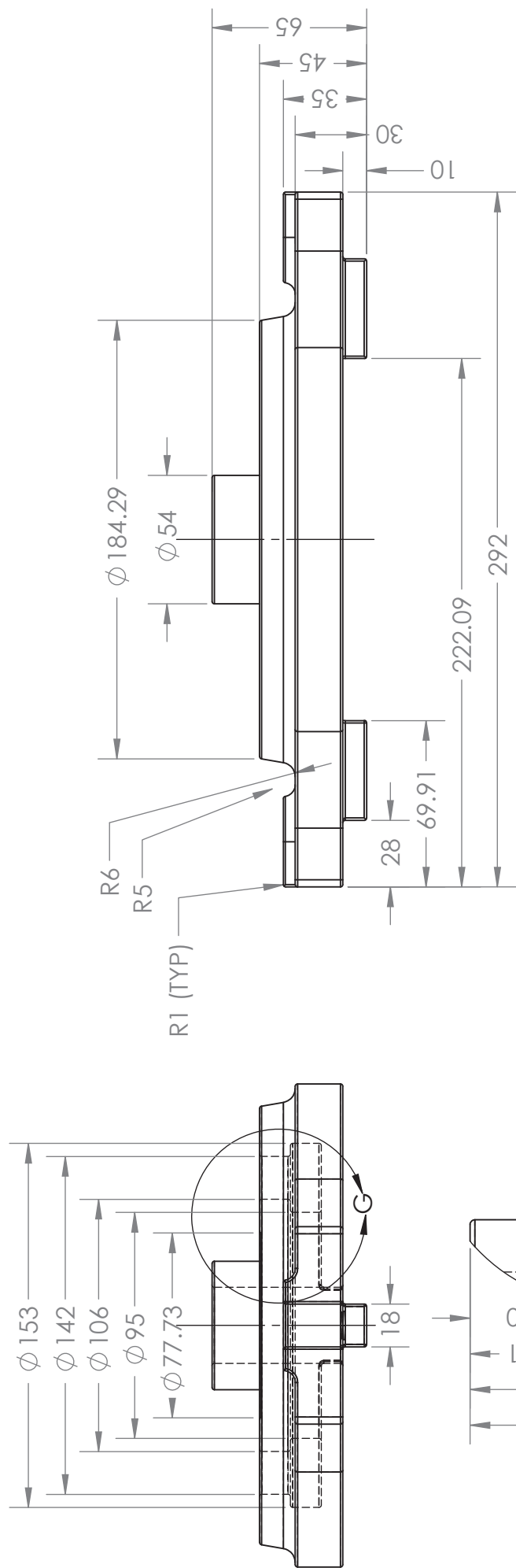
ISOMETRIC VIEW

DESCRIPTION. Stapler Holder	SHEET 5 OF 17	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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	ISOMETRIC VIEW	ISOMETRIC VIEW	ISOMETRIC VIEW	DESCRIPTION: Stapler Pin & Pusher SHEET 9 OF 17 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM
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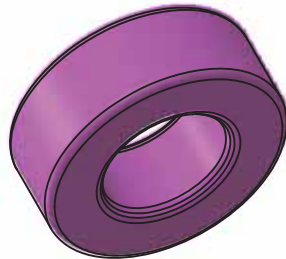
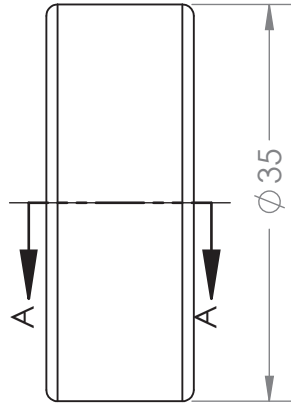
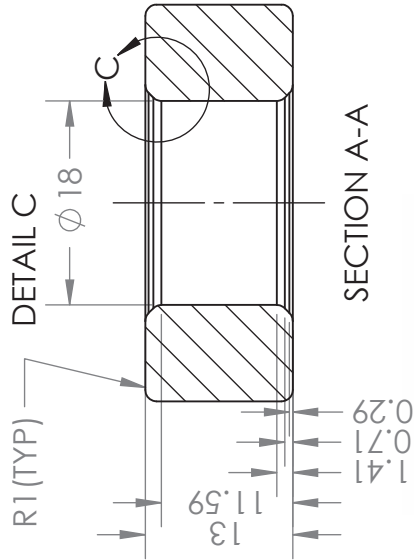
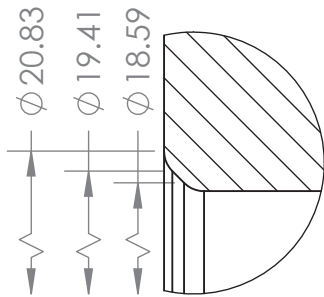
SWIVEL MACHINE VICE



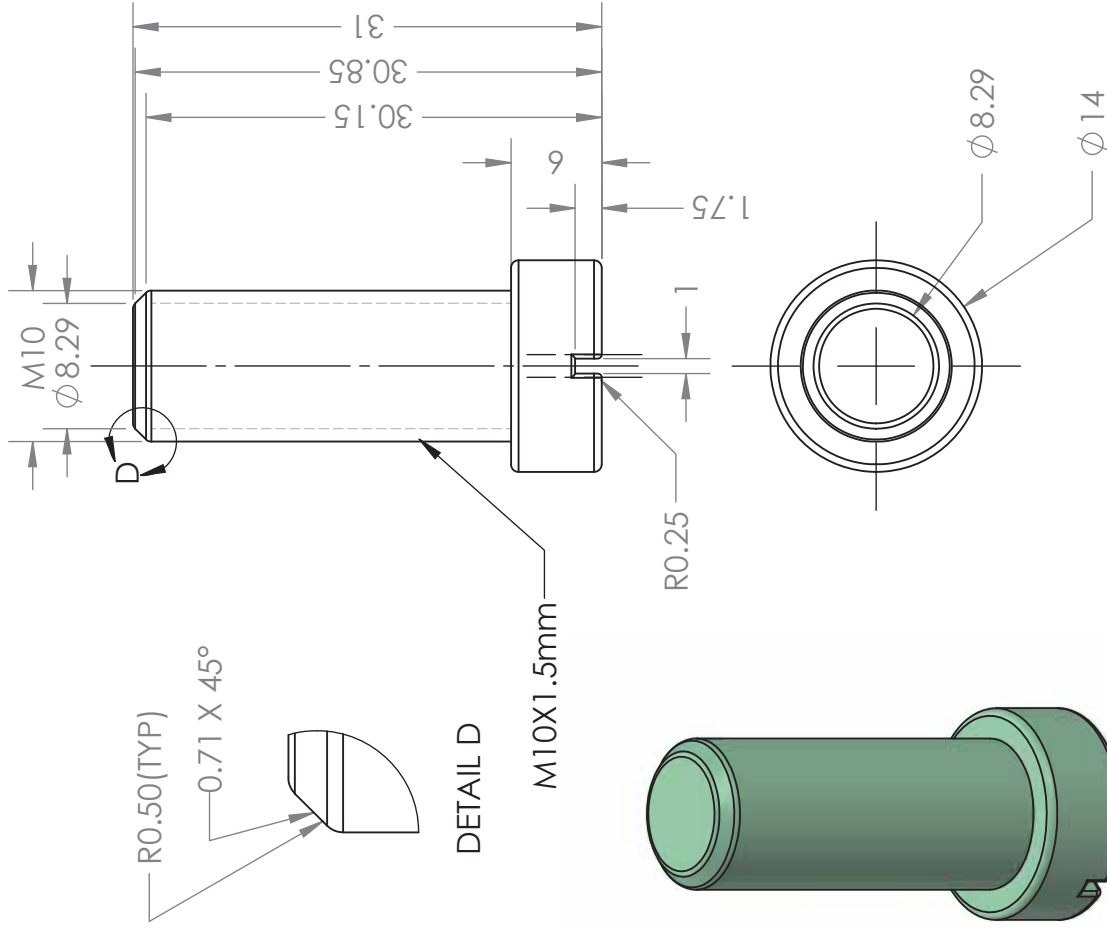


ISOMETRIC VIEW

Orthographic views of a bolt. The front view shows a cylindrical shaft with a hexagonal head. Dimensions include a total length of 58, a distance of 57.71 from the head to the end of the thread, a thread length of 56.29, a head thickness of 10, a shaft diameter of Ø12.59, and an M16 thread specification. A detail view (DETAIL A) shows a chamfer of 1.41 X 45° and a fillet radius of R1(TYP). ISOMETRIC VIEW	Orthographic views of a nut. The front view shows a hexagonal nut with a central hole. Dimensions include a total height of 31.71, a hexagonal face thickness of 10, and a chamfer of 1.90 X 30°. The top view shows a hexagonal shape with a central hole. ISOMETRIC VIEW	DESCRIPTION. Clamp Bolt & Nut SHEET 3 OF 7 ANGLE OF PROJECTION ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



ISOMETRIC VIEW

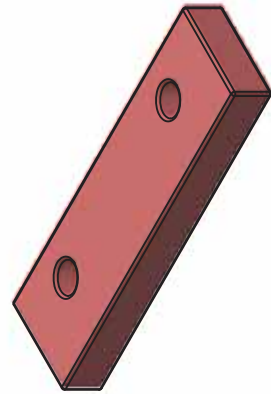
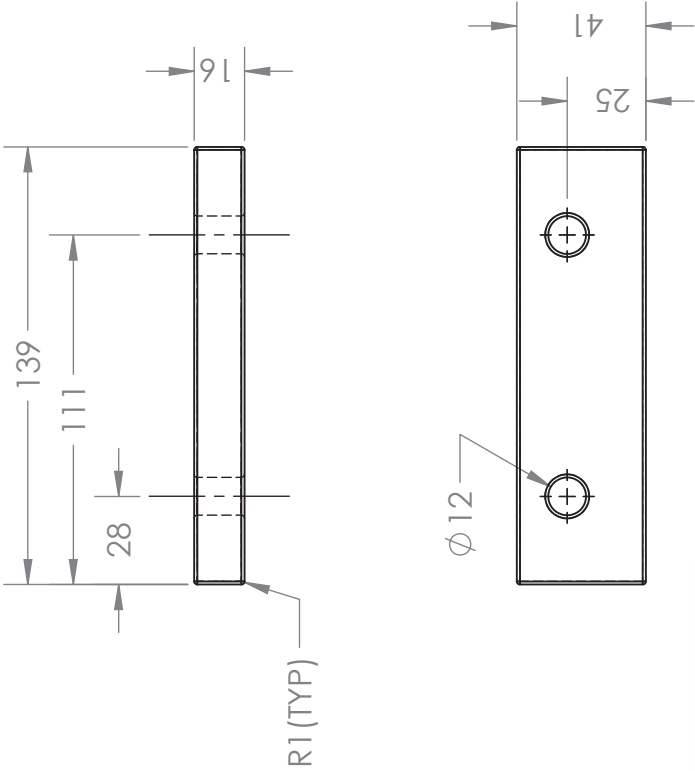
DESCRIPTION. Collar & Jaw screw

SHEET 4 OF 7

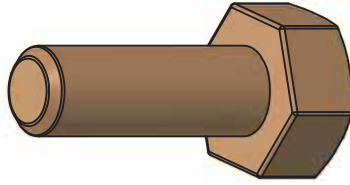
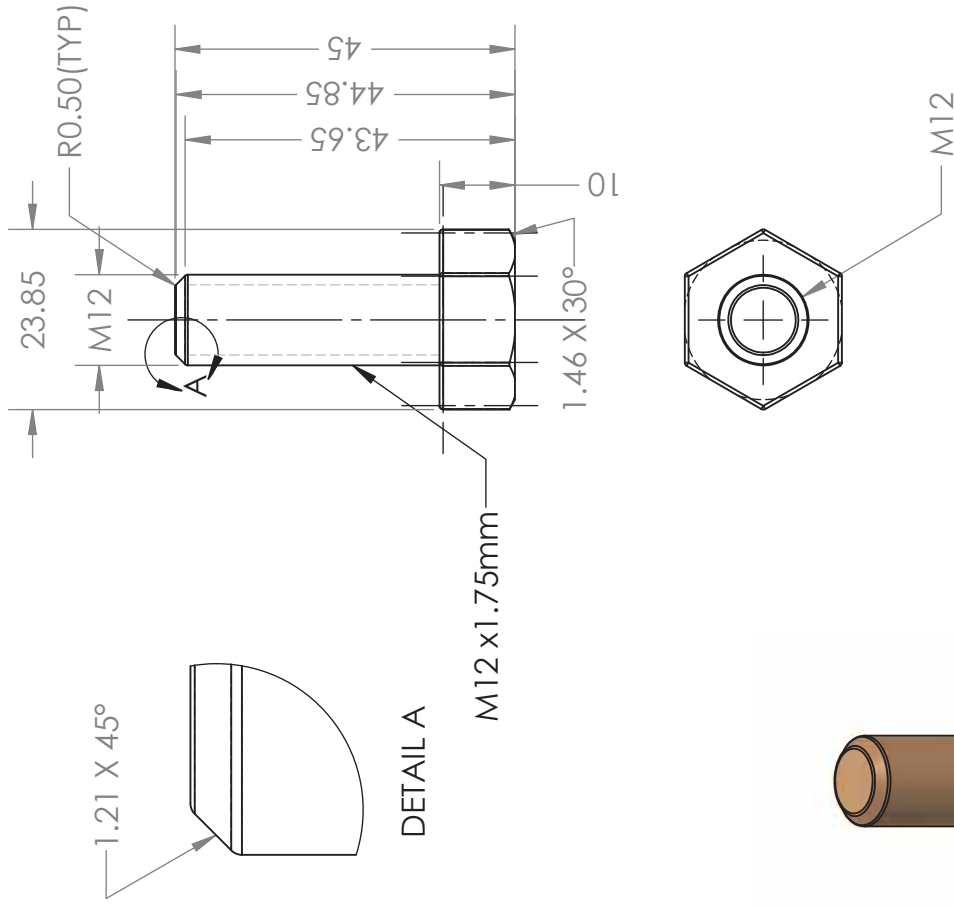
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW

DESCRIPTION. Guide strip & bolt

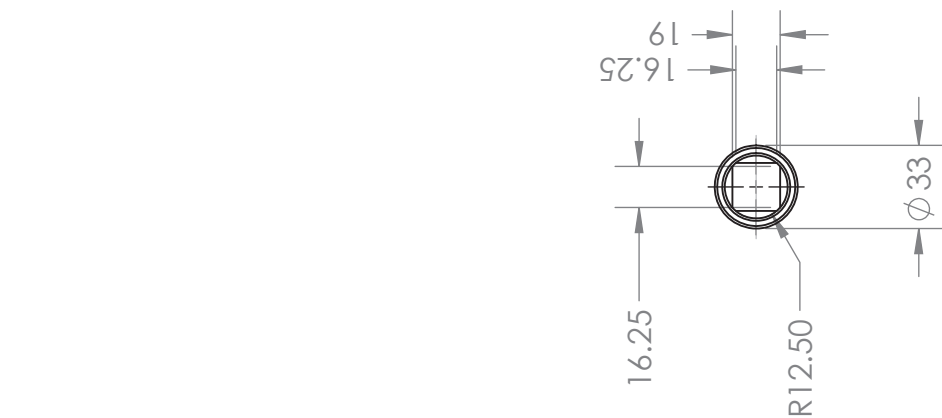
SHEET

5 OF 7

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

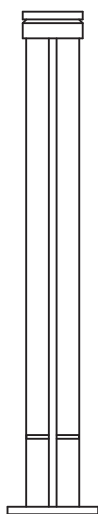
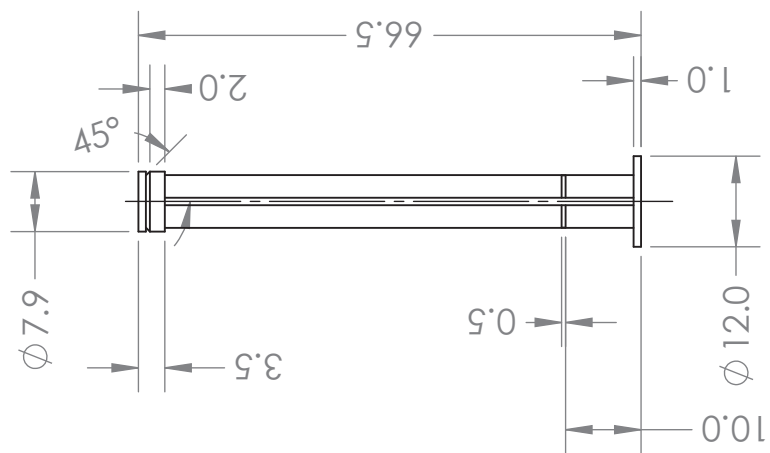
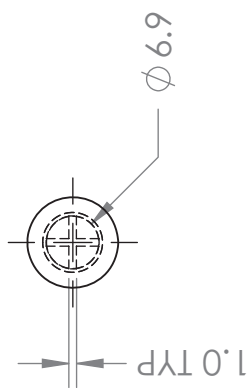


ISOMETRIC VIEW

DESCRIPTION.	SHEET	7 OF 7	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
Screw rod					

SYRINGE





ALL DIMENSIONS ARE IN MM

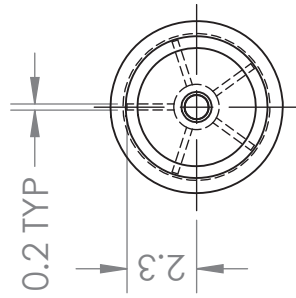
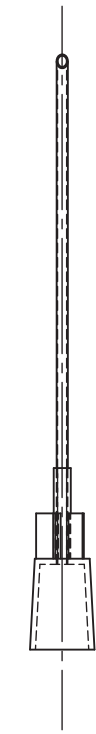


ANGLE OF PROJECTION

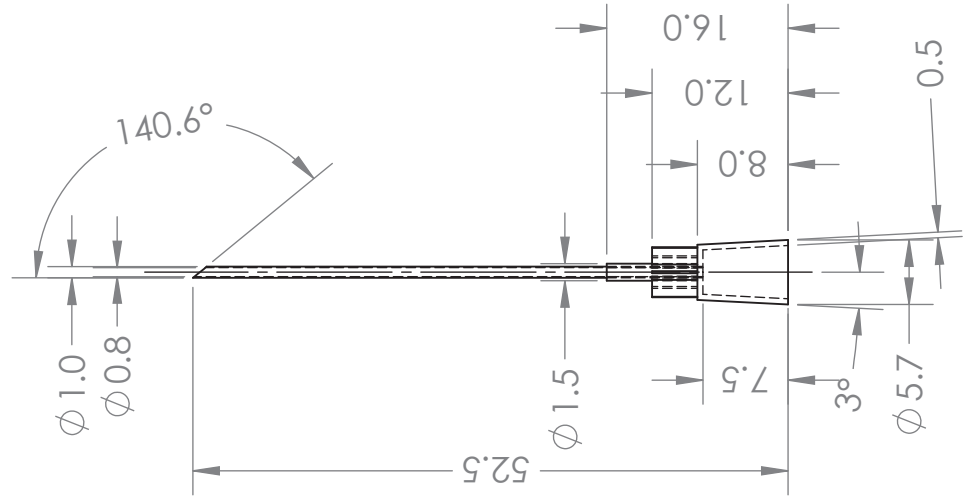
1 OF 1

SHEET

DESCRIPTION : PLUNGER



DETAIL F
SCALE 4 : 1



DESCRIPTION : NEEDLE

SHEET

1 OF 1

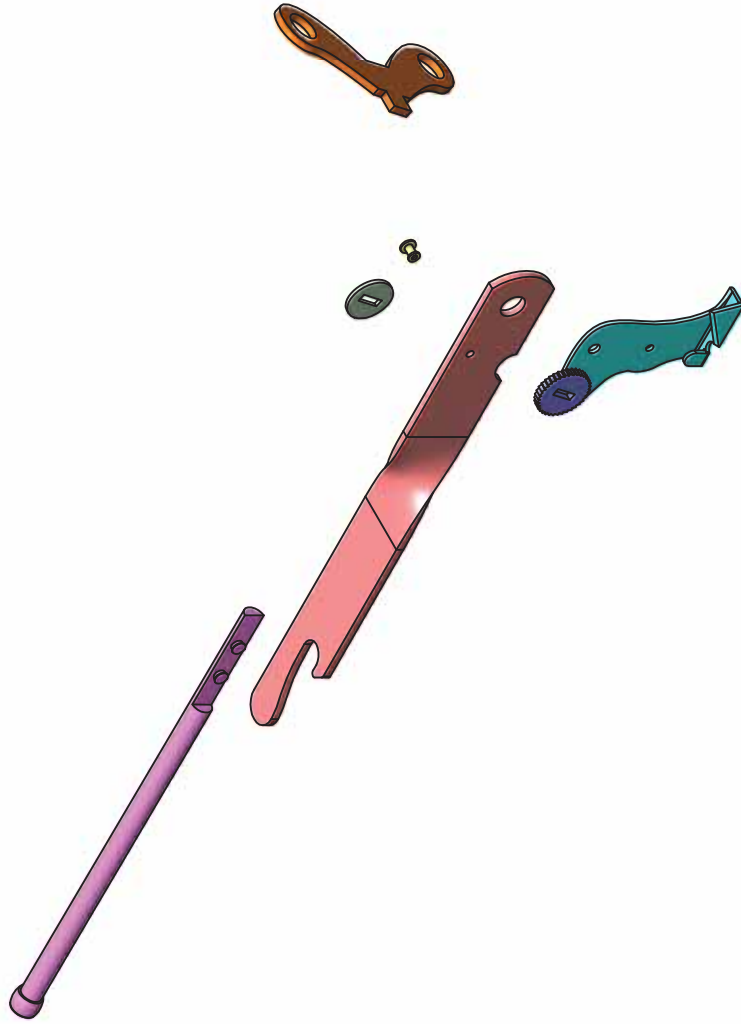
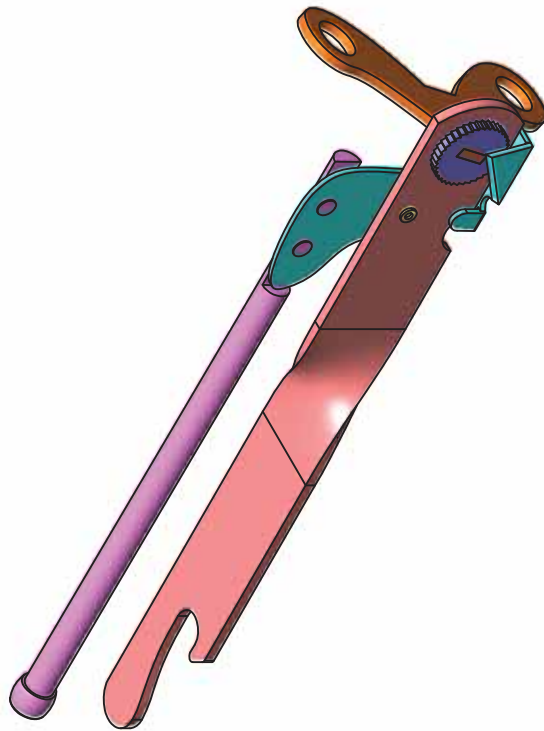
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

TIN CAN OPENER





DESCRIPTION. Exploded View

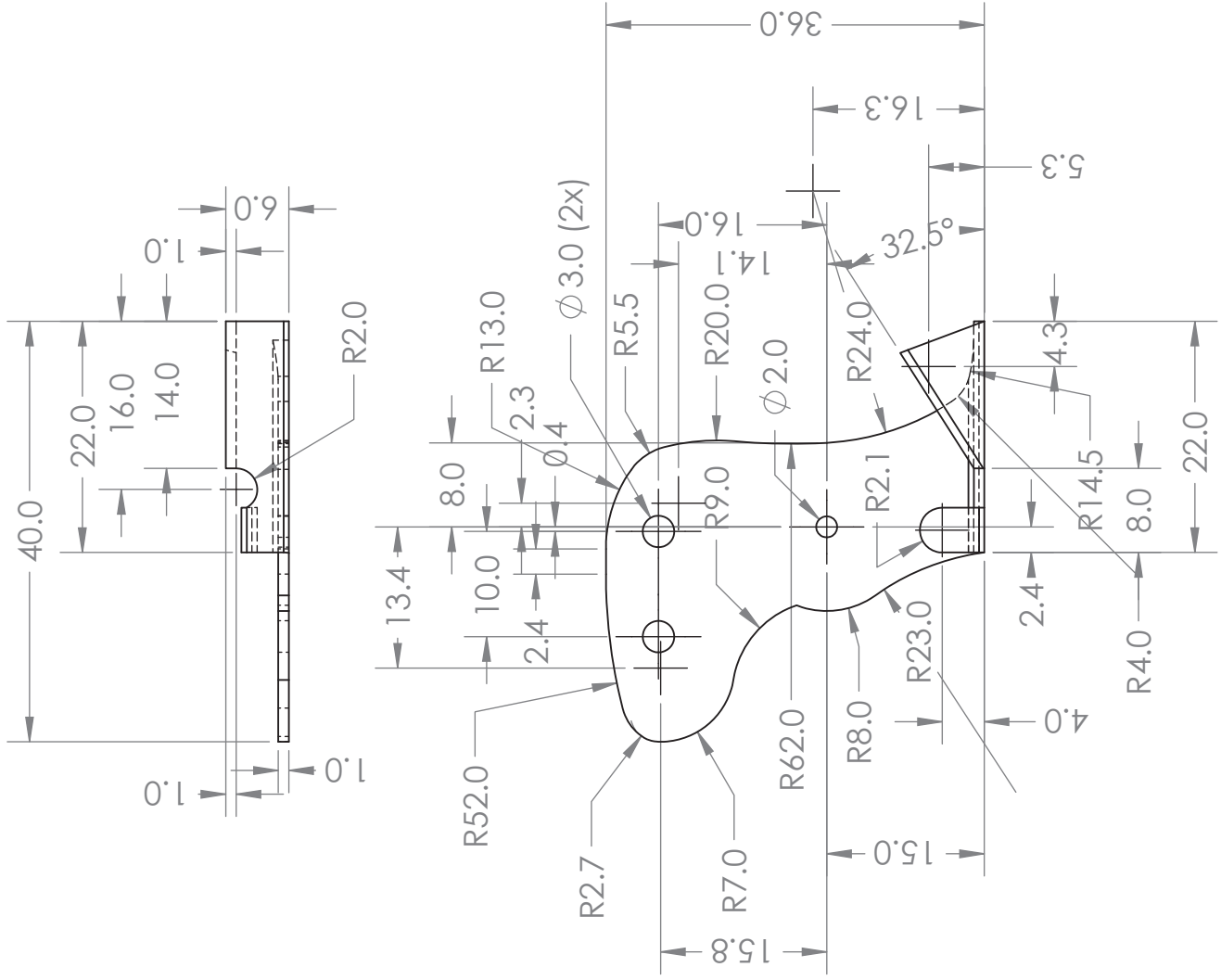
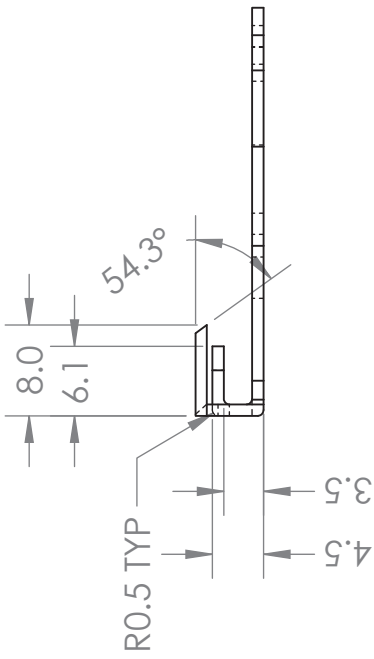
SHEET

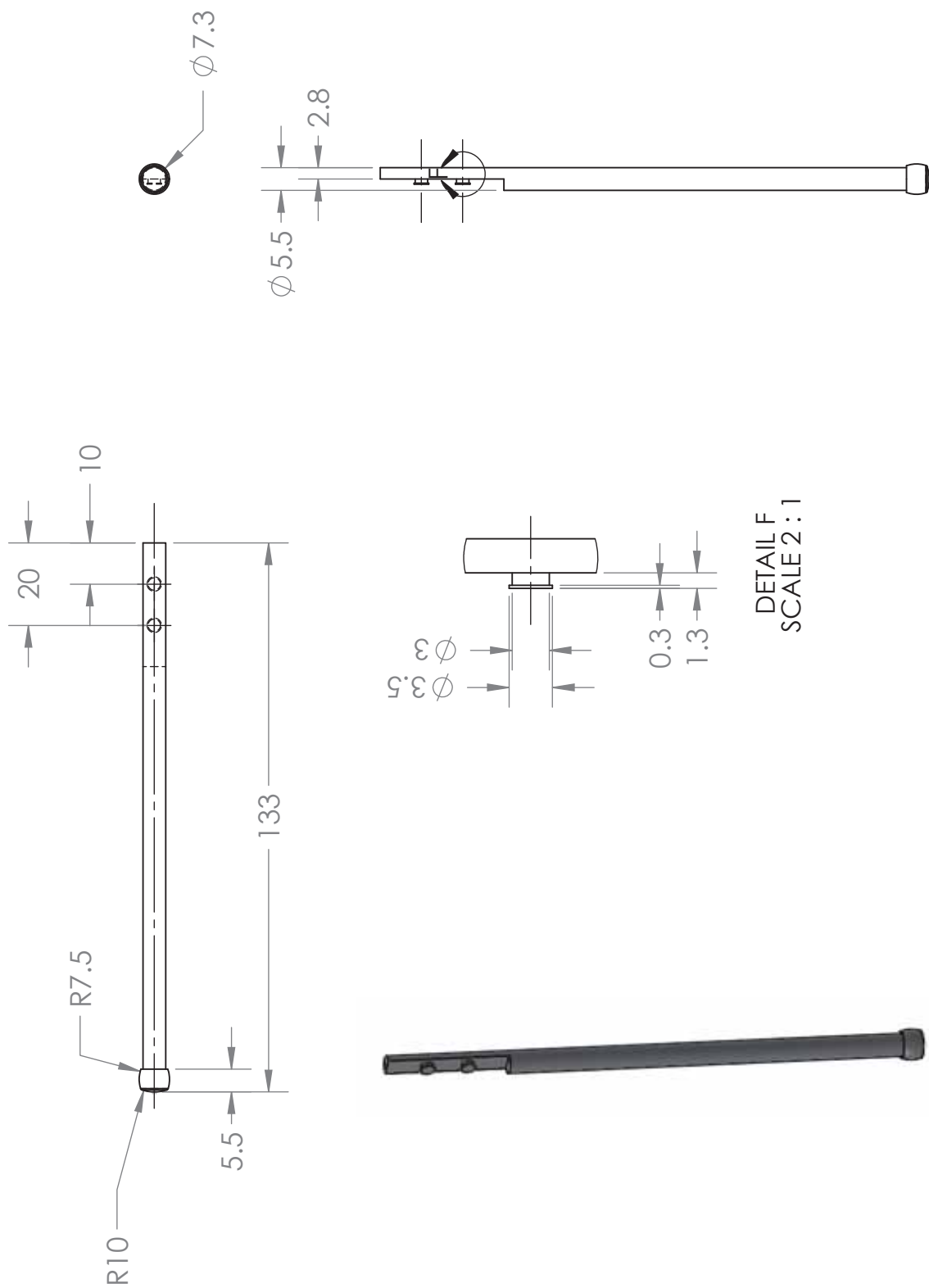
1 OF 1

ANGLE OF PROJECTION

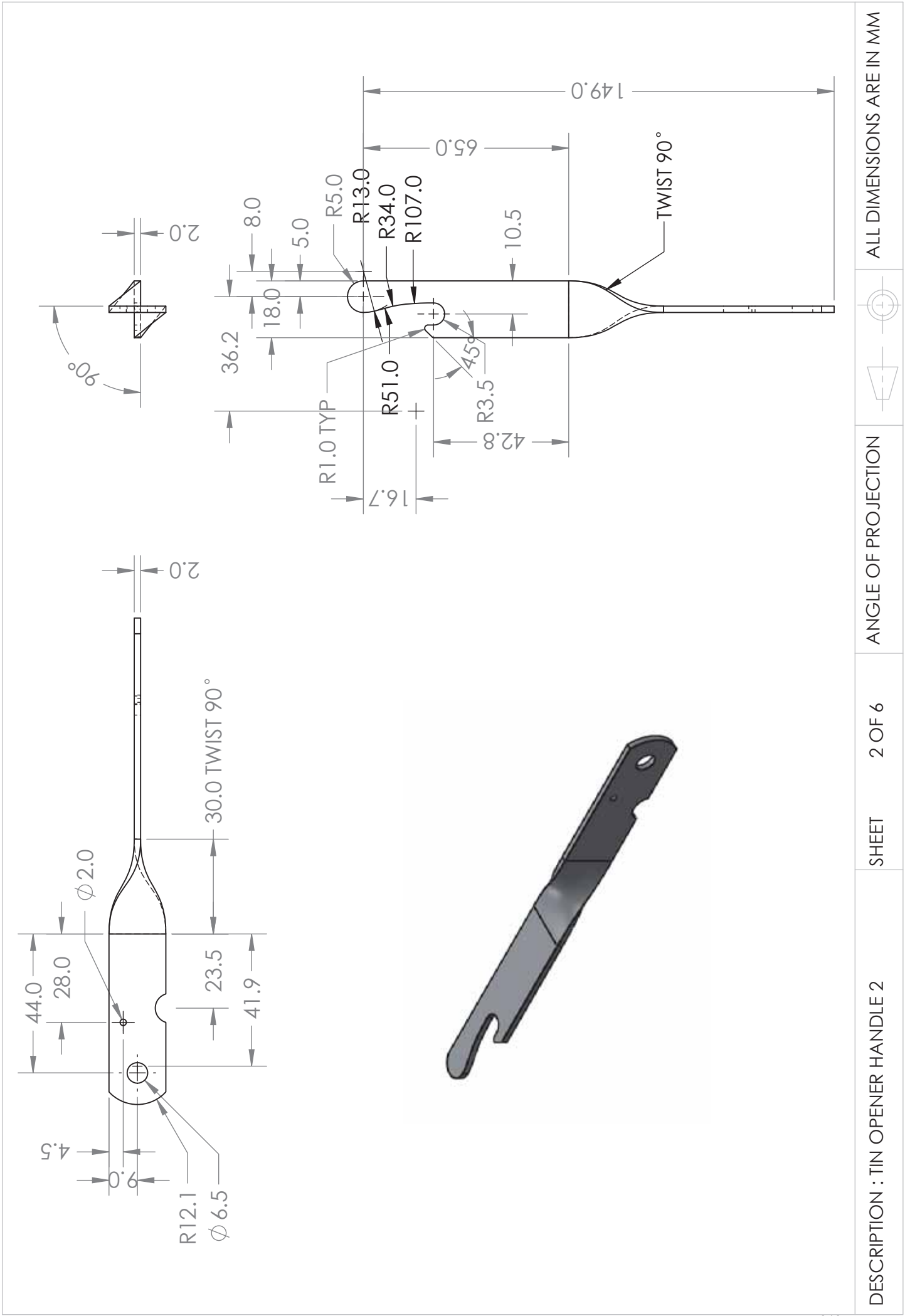


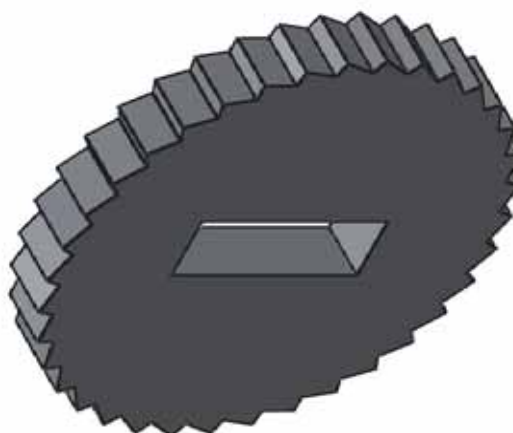
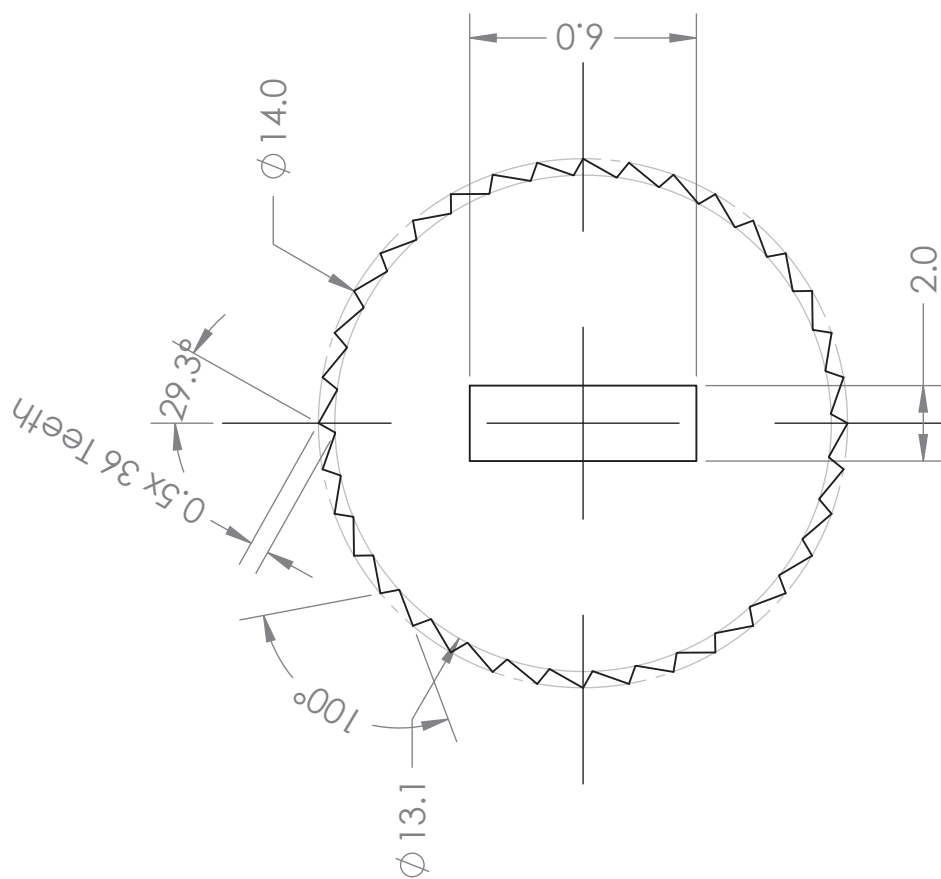
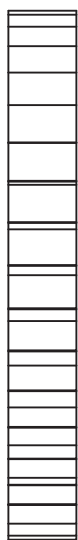
ALL DIMENSIONS ARE IN MM

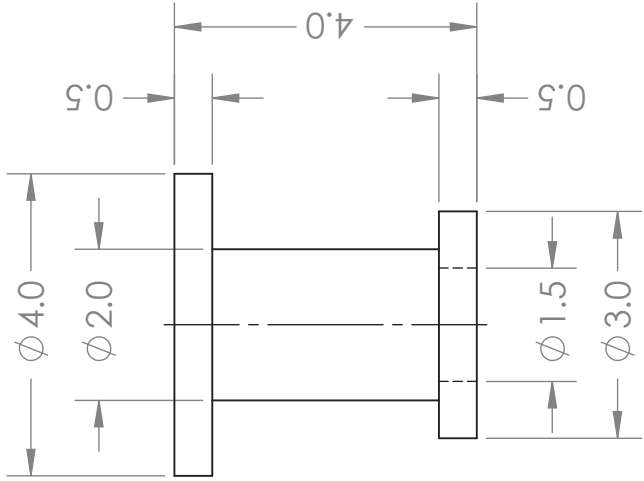
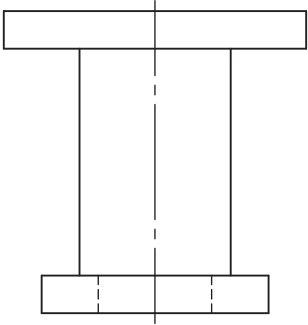
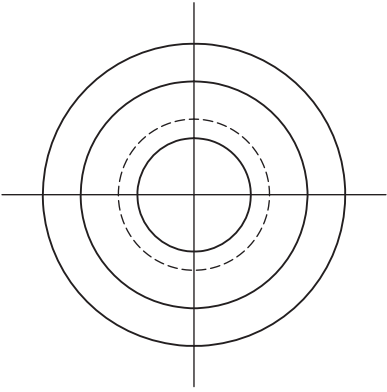




DESCRIPTION : TIN OPENER HANDLE 1	SHEET	3 OF 6	ANGLE OF PROJECTION	 	ALL DIMENSIONS ARE IN MM
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DESCRIPTION : PIN

SHEET

5 OF 6

ANGLE OF PROJECTION



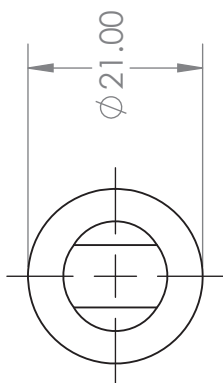
ALL DIMENSIONS ARE IN MM

VERTICAL HOLD TOGGLE CLAMP

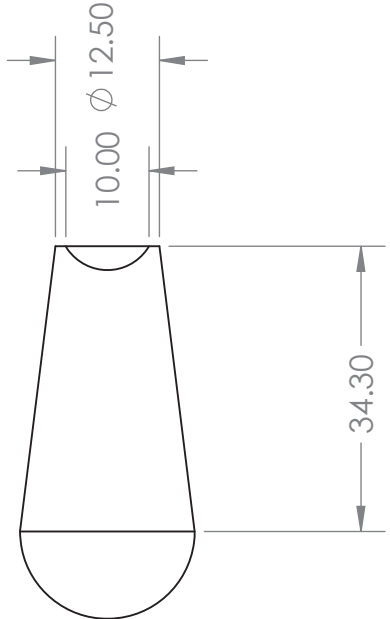


6 5 4 3 2 1

D



C



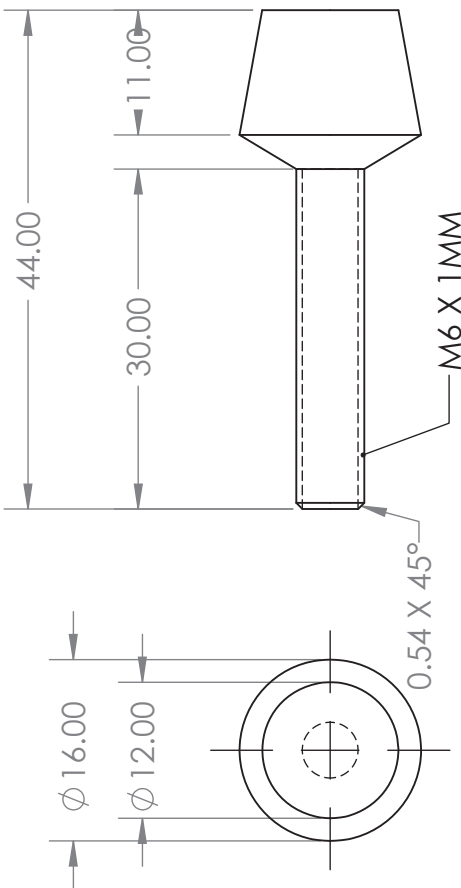
B



ISOMETRIC VIEW

A

D



C

B

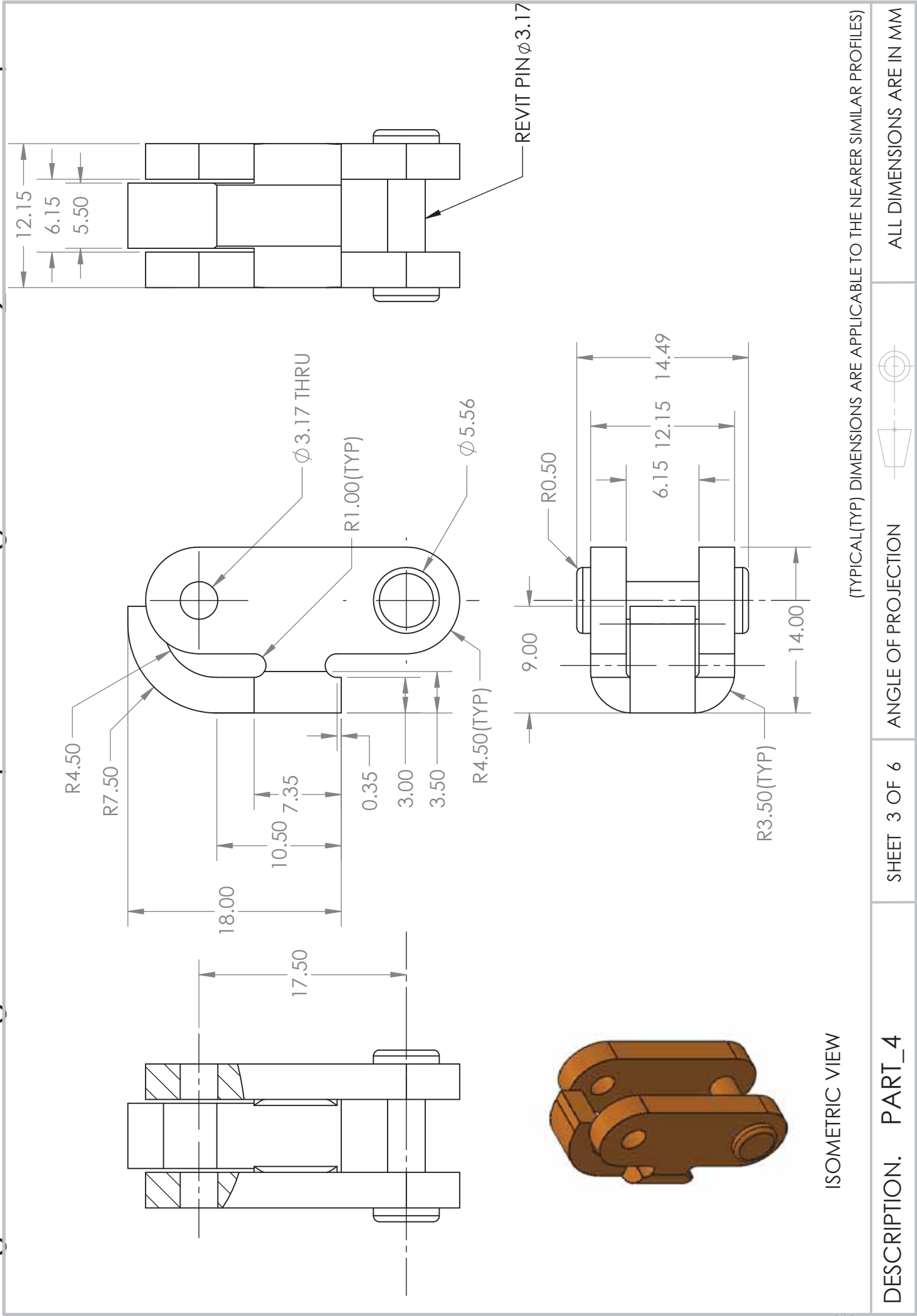


ISOMETRIC VIEW

A

DESCRIPTION. Handle & Stud	SHEET 2 OF 6	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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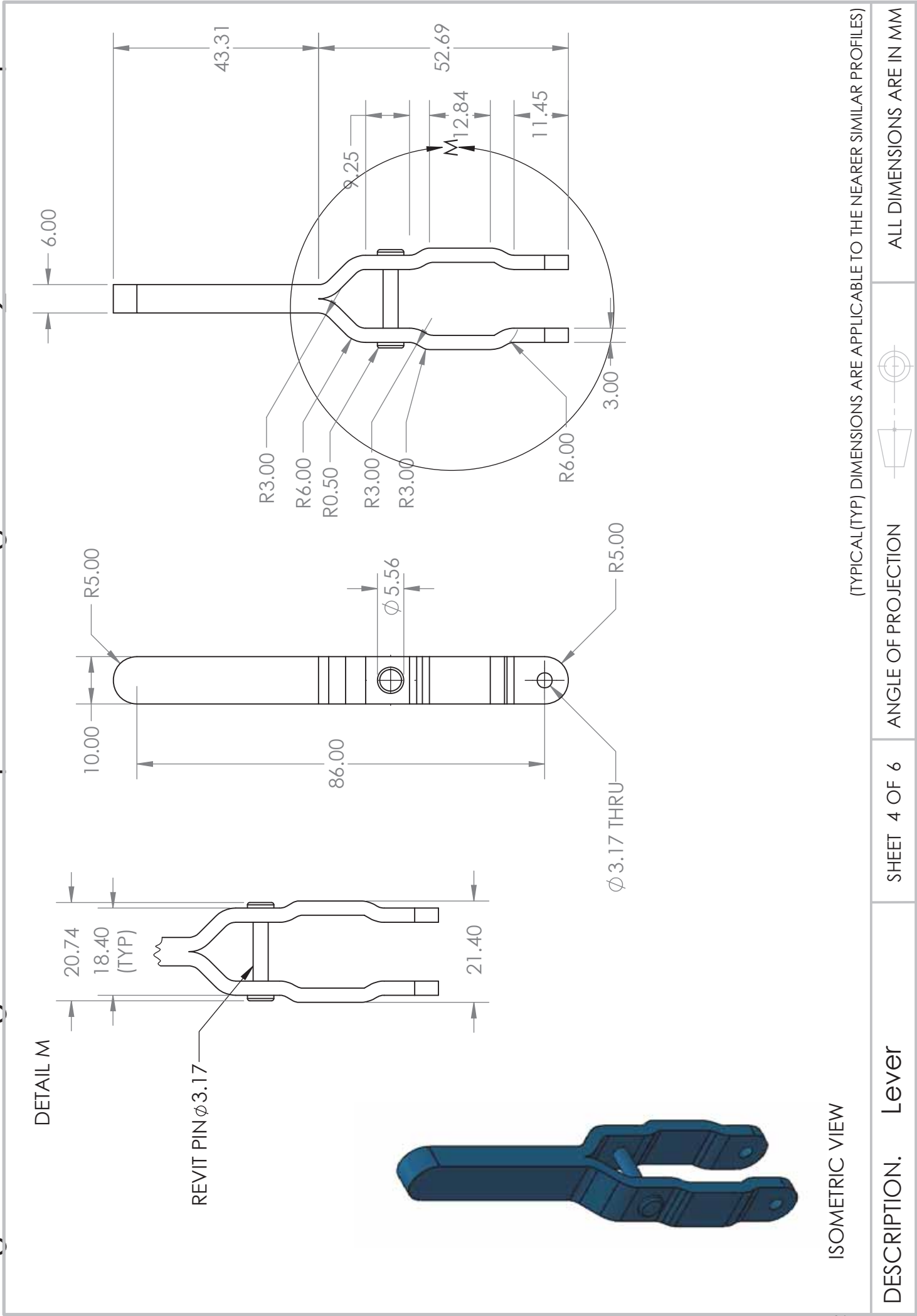
6 5 4 3 2 1



ISOMETRIC VIEW

(TYPICAL(TYP) DIMENSIONS ARE APPLICABLE TO THE NEARER SIMILAR PROFILES)

DESCRIPTION. PART_4	SHEET 3 OF 6	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

A³¹⁷

(TYPICAL(TYP) DIMENSIONS ARE APPLICABLE TO THE NEARER SIMILAR PROFILES)

DESCRIPTION. Lever

SHEET 4 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

6

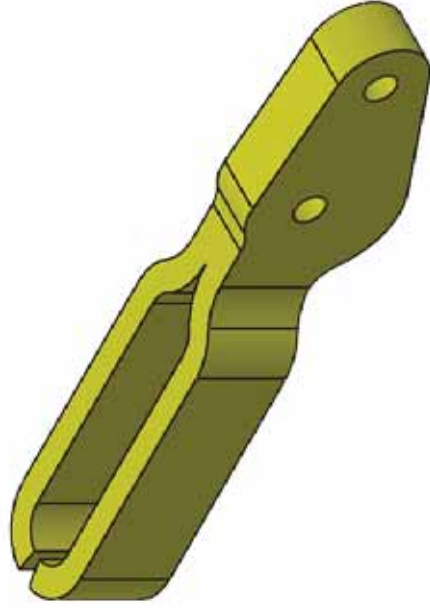
5

4

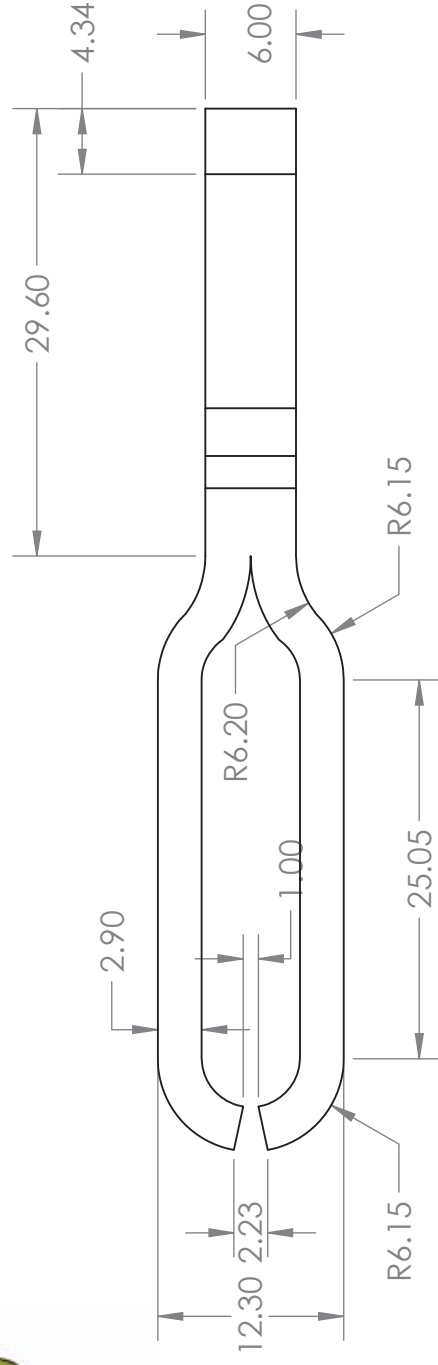
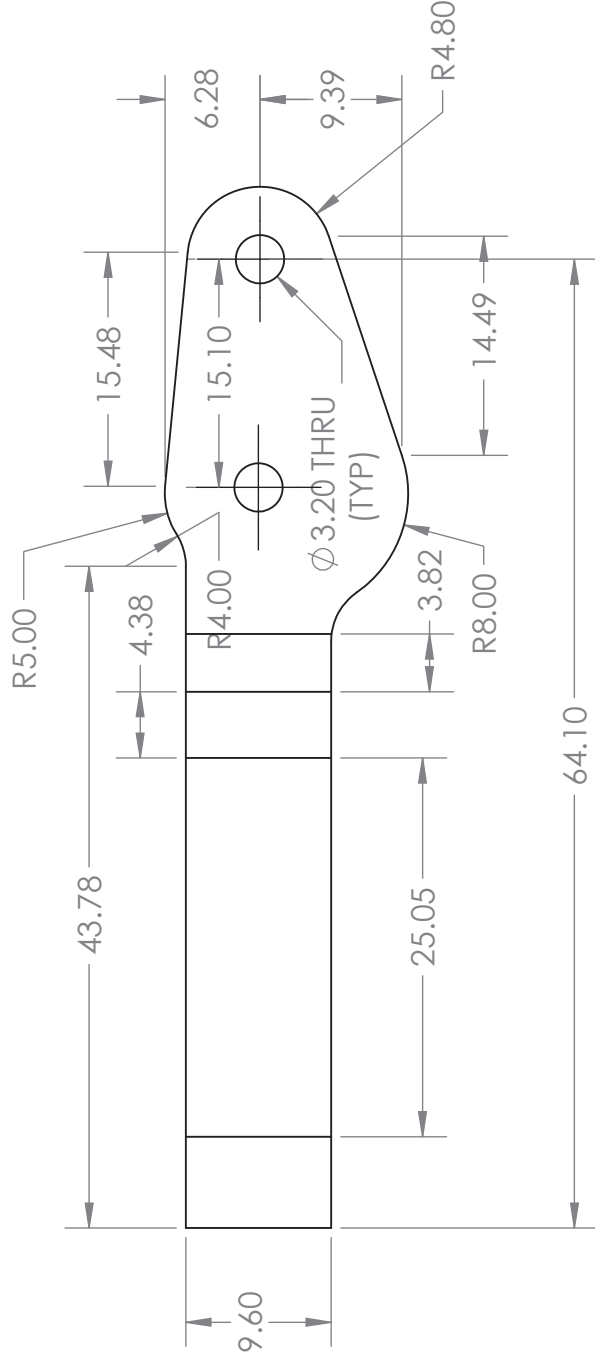
3

2

1



ISOMETRIC VIEW



(TYPICAL(TYP) DIMENSIONS ARE APPLICABLE TO THE NEARER SIMILAR PROFILES)

DESCRIPTION. Toggle Link

SHEET 5 OF 6

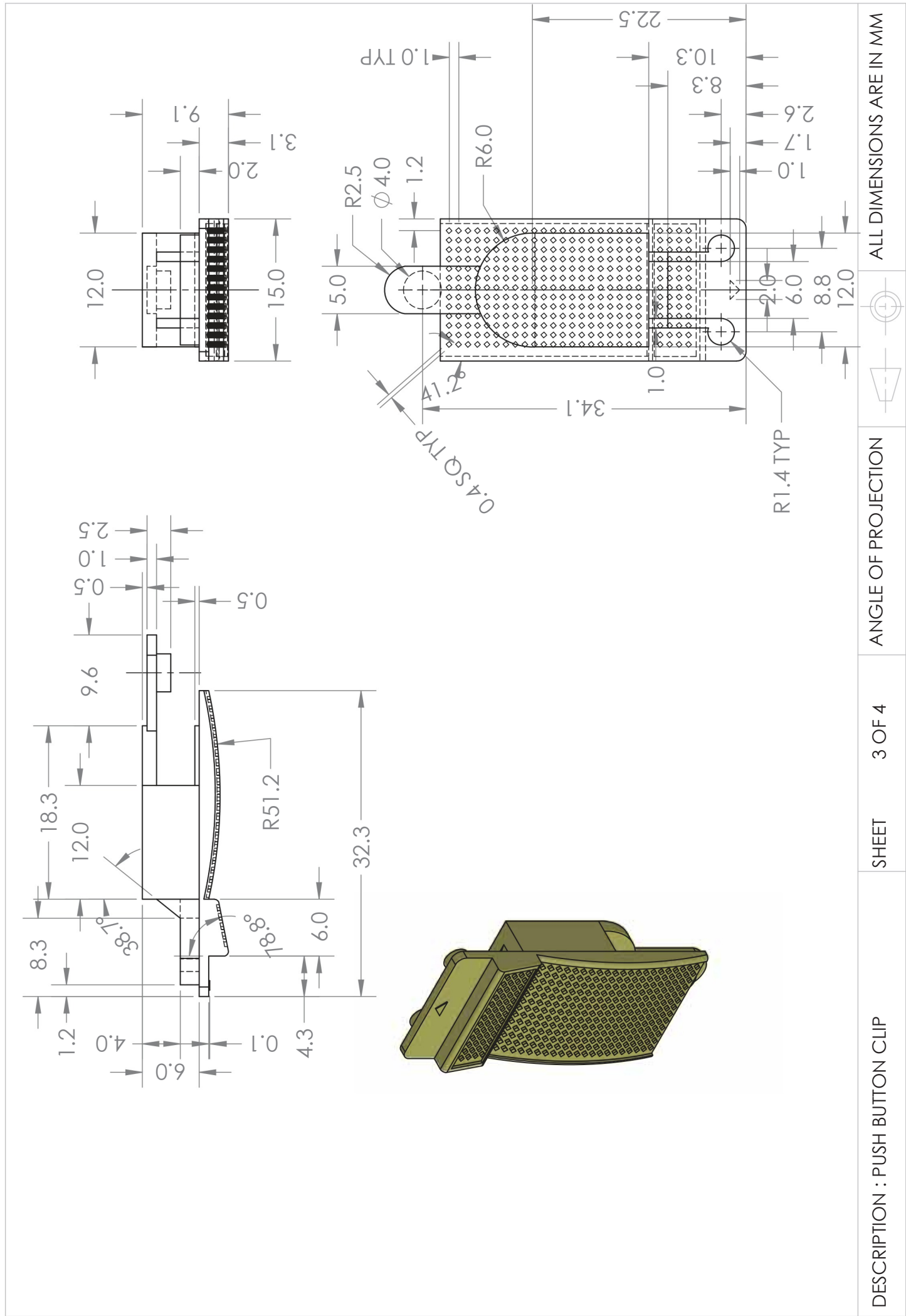
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

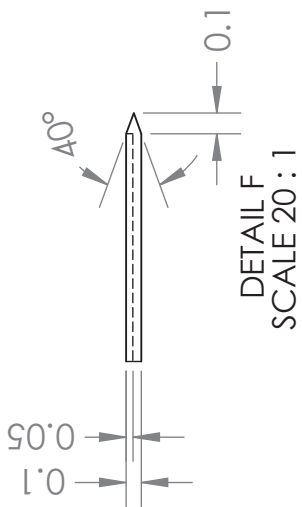
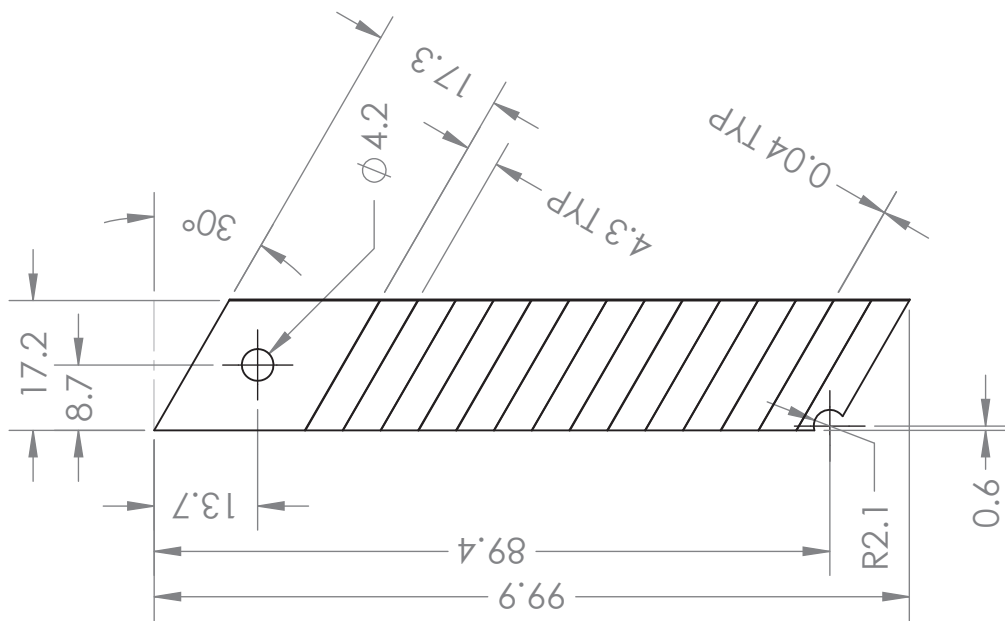
UTILITY KNIFE





DESCRIPTION : PUSH BUTTON CLIP	SHEET	3 OF 4	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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F



DESCRIPTION : BLADE

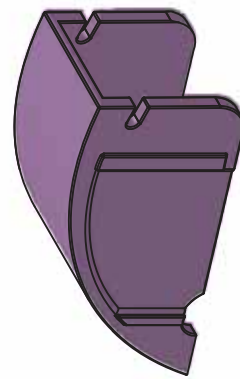
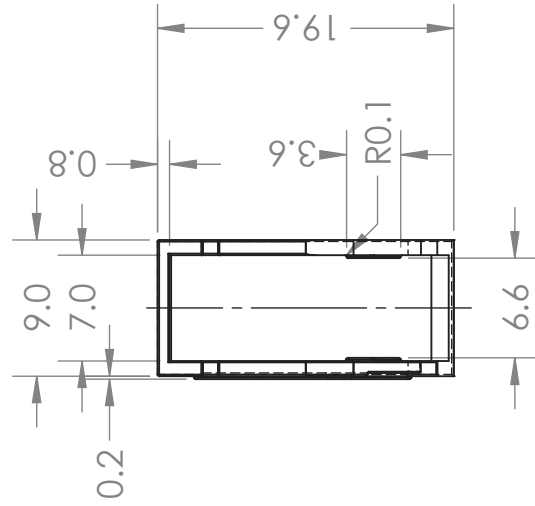
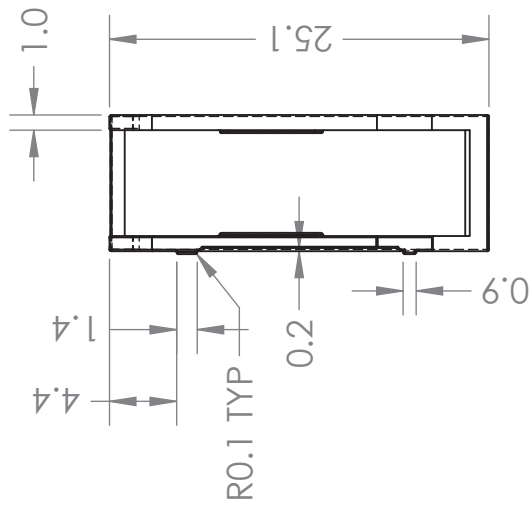
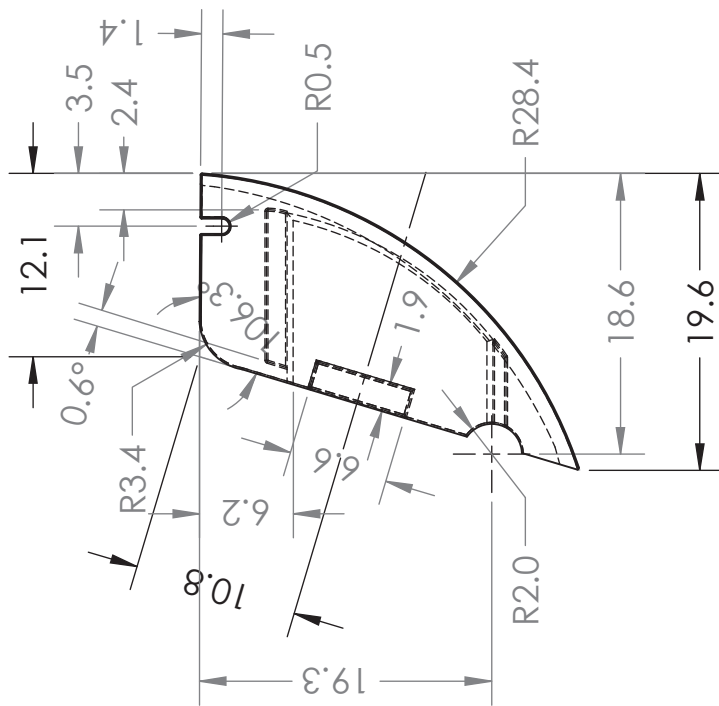
SHEET

1 OF 4

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ALL DIMENSIONS ARE IN MM



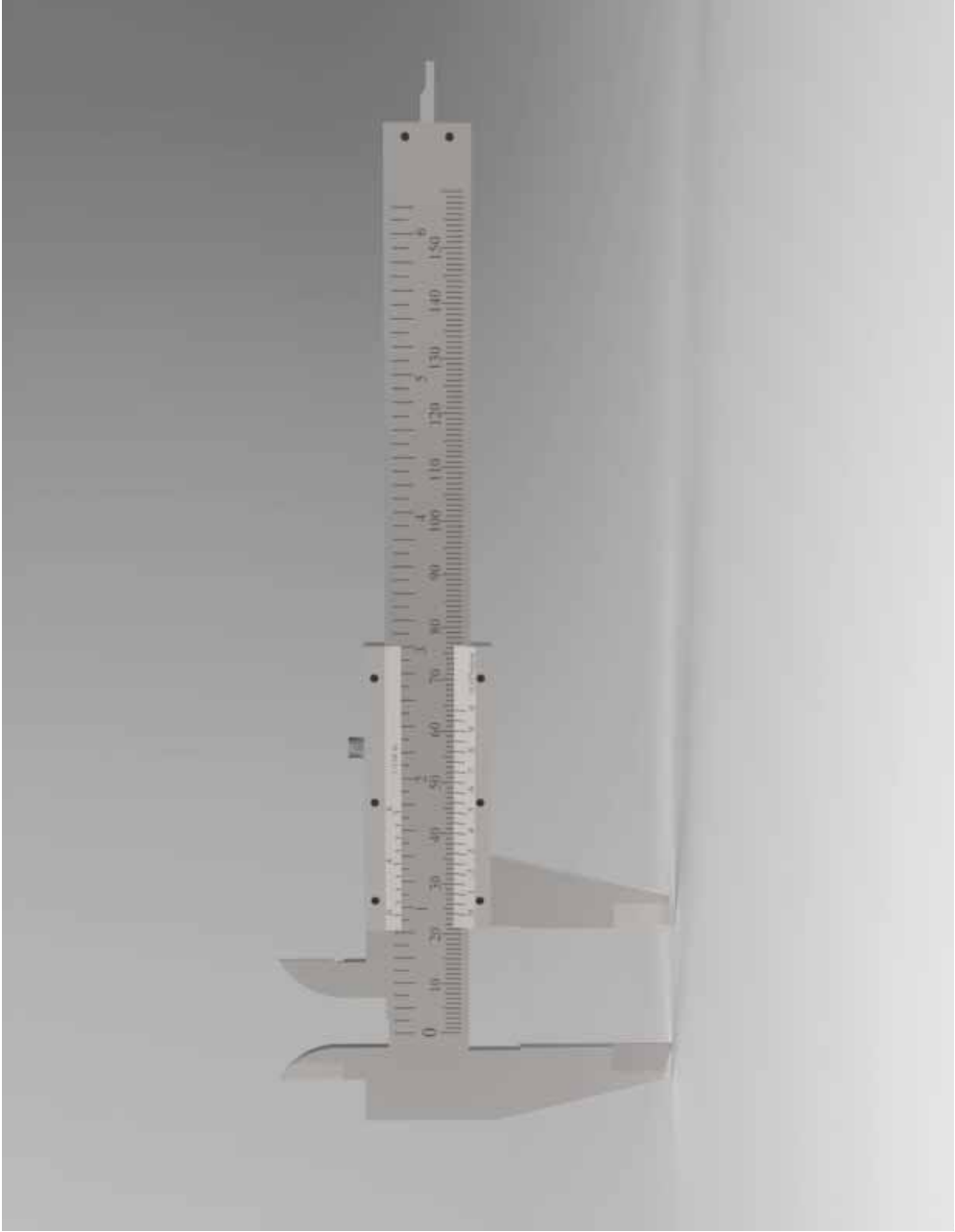
ANGLE OF PROJECTION

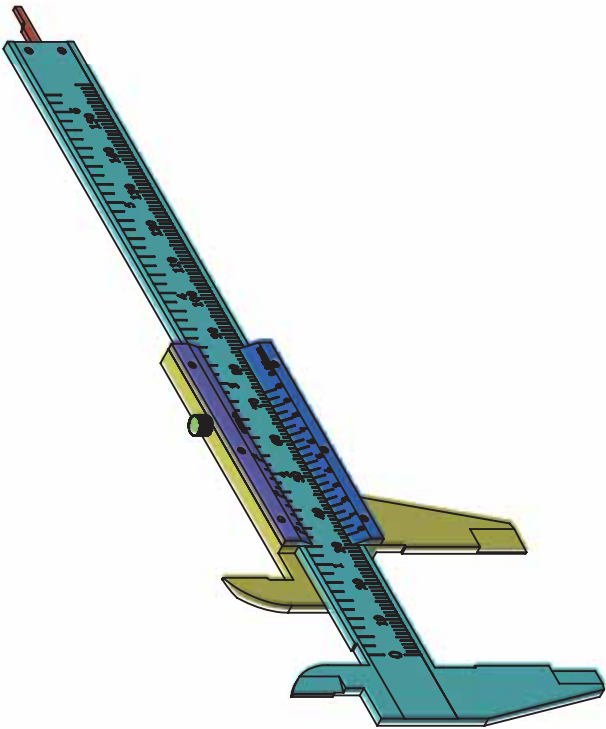
2 OF 4

SHEET

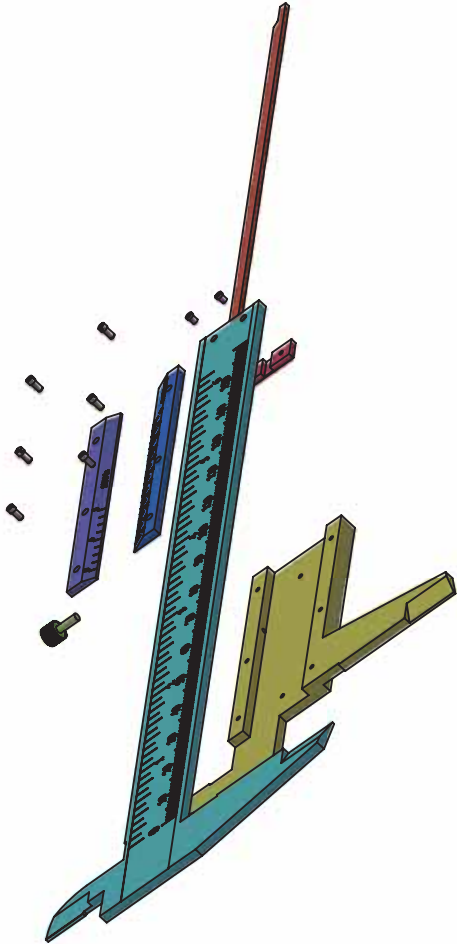
DESCRIPTION : COVER PLATE

VERNIER CALIPER





ISOMETRIC VIEW



EXPLODED VIEW

DESCRIPTION. Vernier Caliper - Exploded

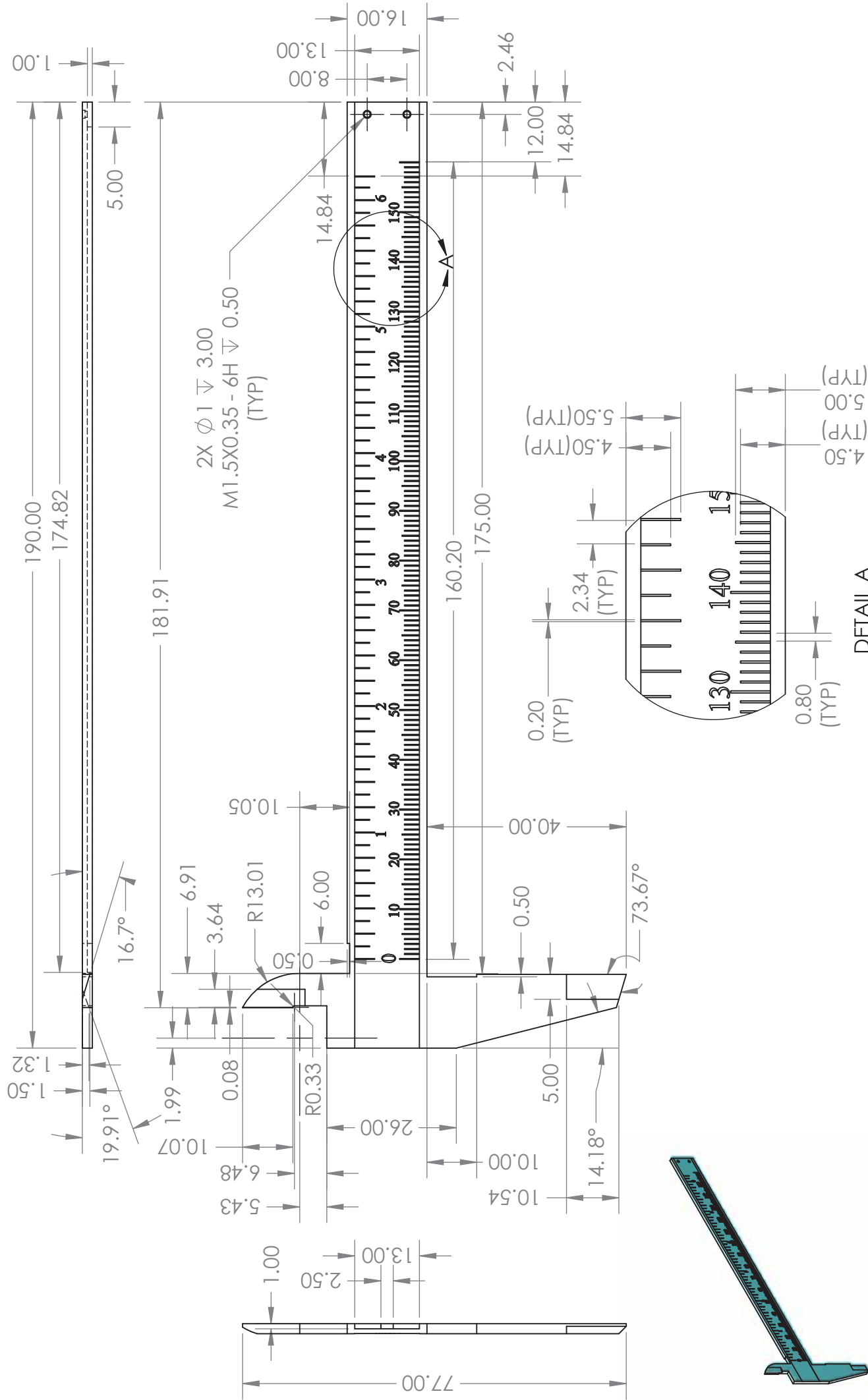
SHEET

1 OF 1

ANGLE OF PROJECTION



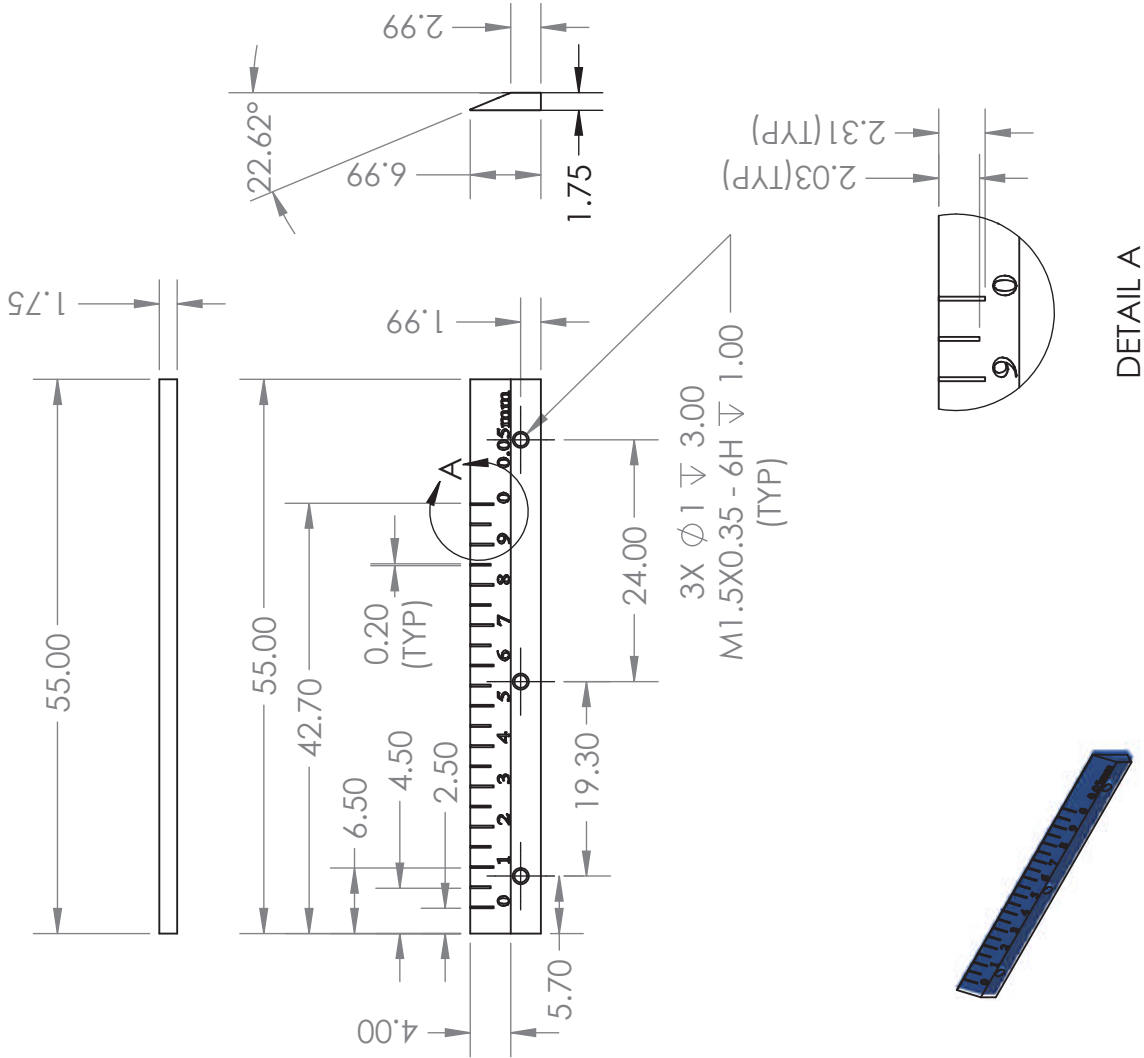
ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

ENGRAVED SCALE DEPTH ARE 0.01mm

DESCRIPTION. Main Scale - Fixed Jaw	SHEET 1 OF 6	ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW

ISOMETRIC VIEW

ENGRAVED SCALE DEPTH ARE 0.01mm

DESCRIPTION. Metric & Inch Scale

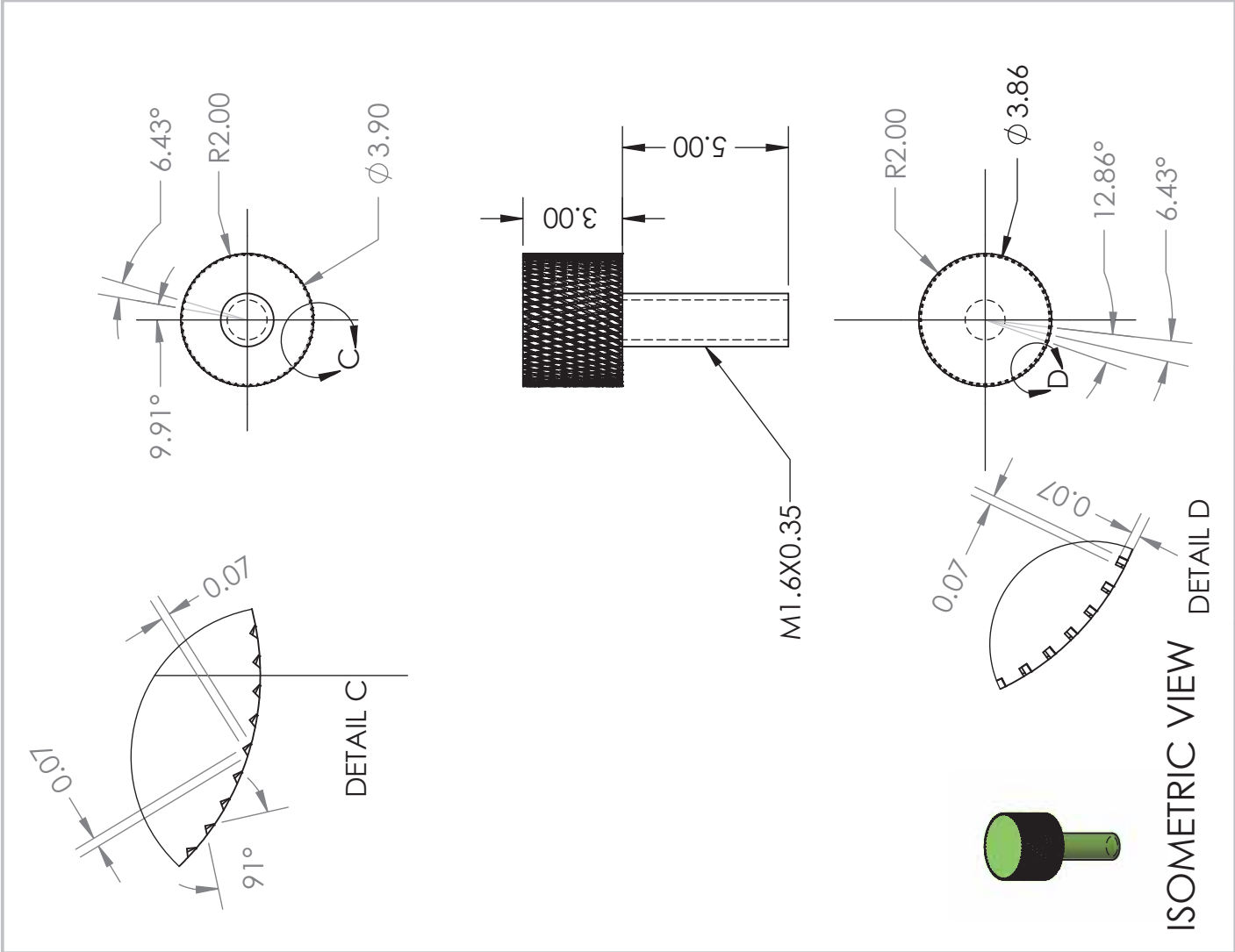
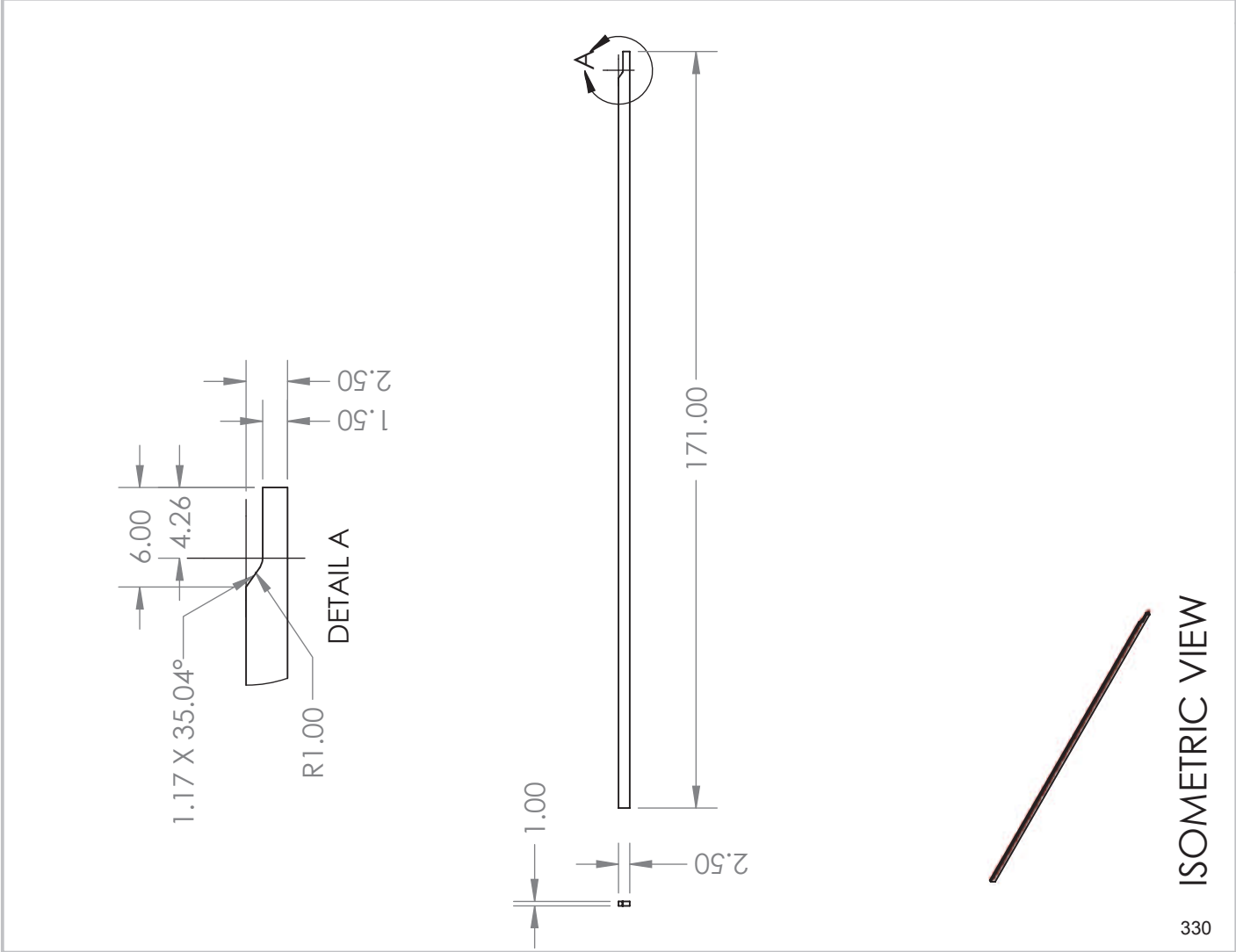
SHEET

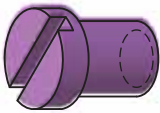
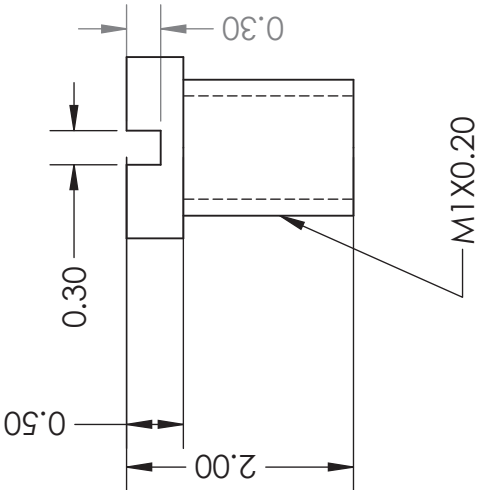
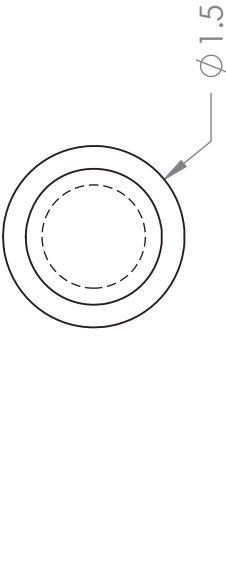
3 OF 6

ANGLE OF PROJECTION

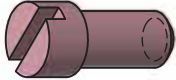
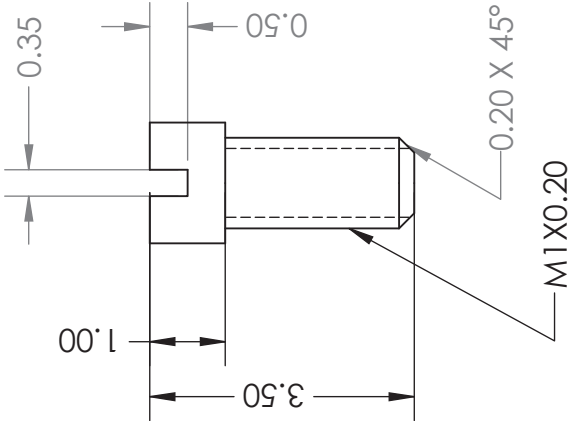
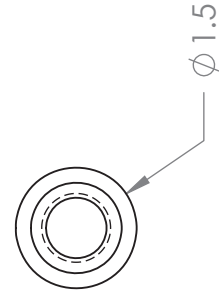


ALL DIMENSIONS ARE IN MM

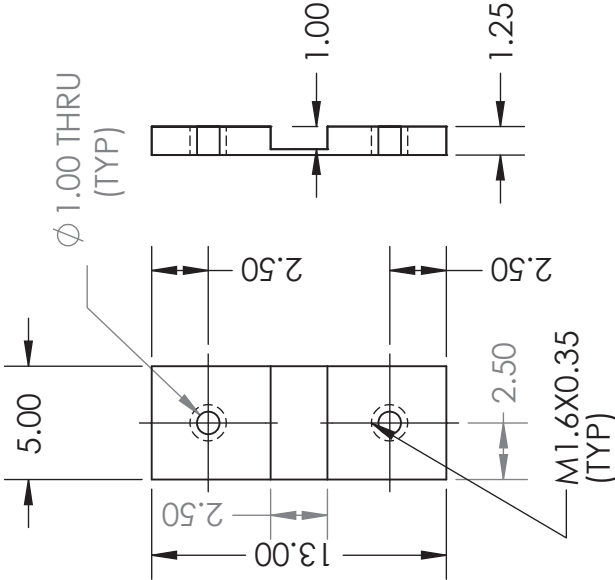
 ISOMETRIC VIEW	 ISOMETRIC VIEW
DESCRIPTION. Depth Rod & Lock Screw	SHEET 4 OF 6
ANGLE OF PROJECTION	ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

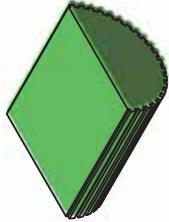
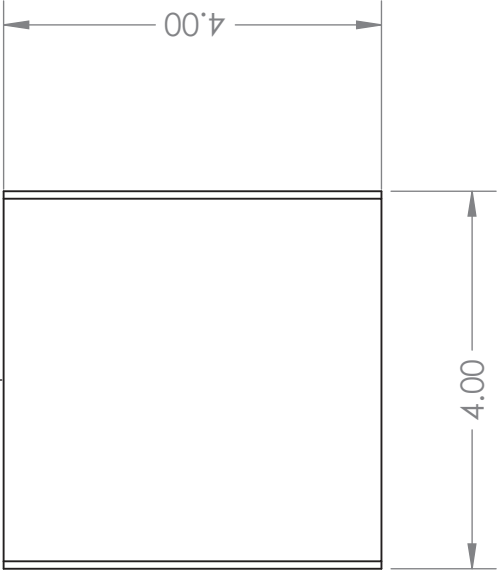
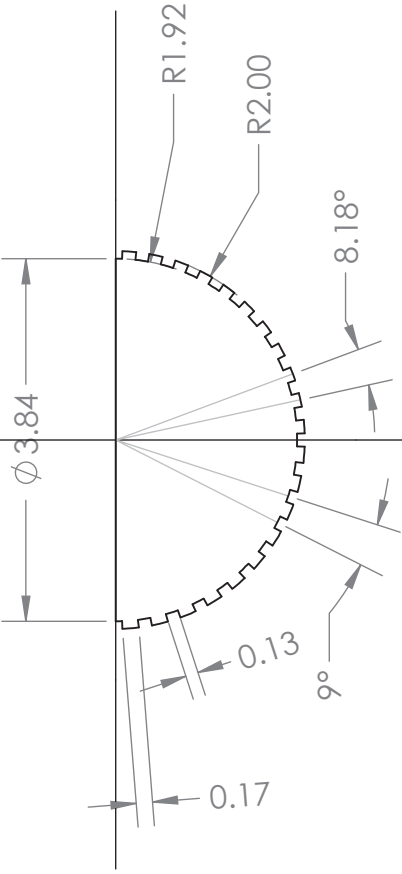
DESCRIPTION. Screws & Stopper

SHEET 5 OF 6

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

ALL DIMENSIONS ARE IN MM



ANGLE OF PROJECTION

6 OF 6

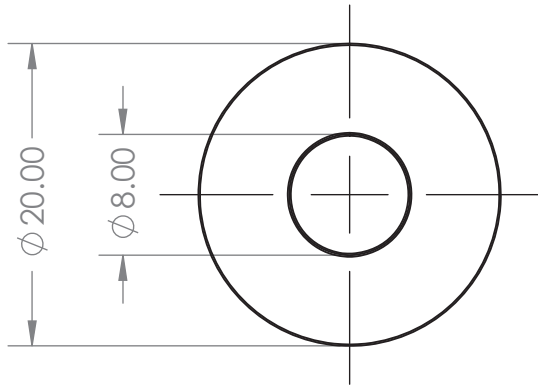
SHEET

Thumb Grip

DESCRIPTION.

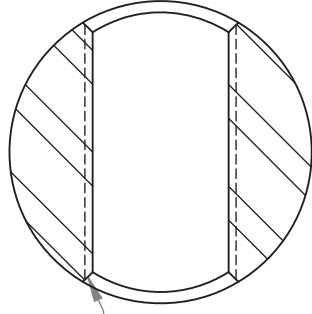
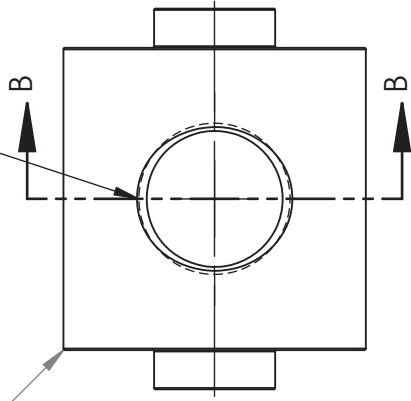
WELDING CLAMP





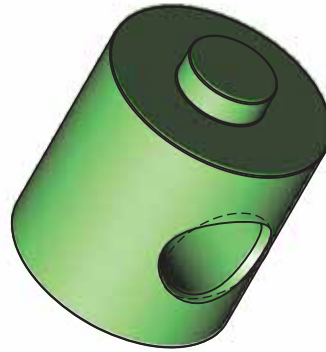
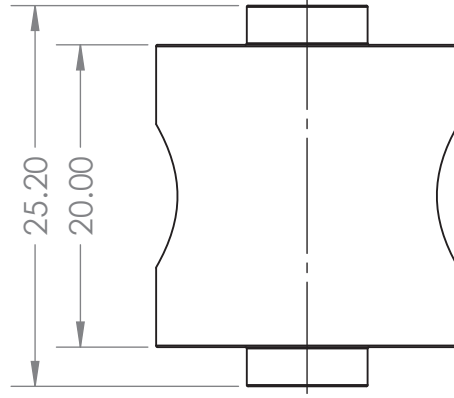
FILLET R0.10
(FOR ALL
EDGES)

M10x1.0 Machine Threads



SECTION B-B

0.64 X 45°
(TYP)



ISOMETRIC VIEW

DESCRIPTION. Clamp Base Spacer

SHEET

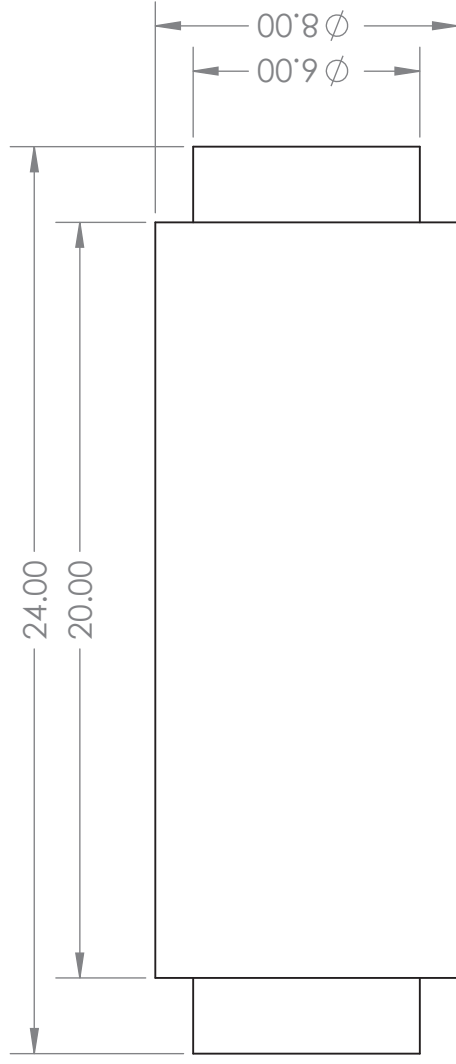
1 OF 11

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

M4x0.7 Machine Threads



ISOMETRIC VIEW

DESCRIPTION. Clamp Base Support

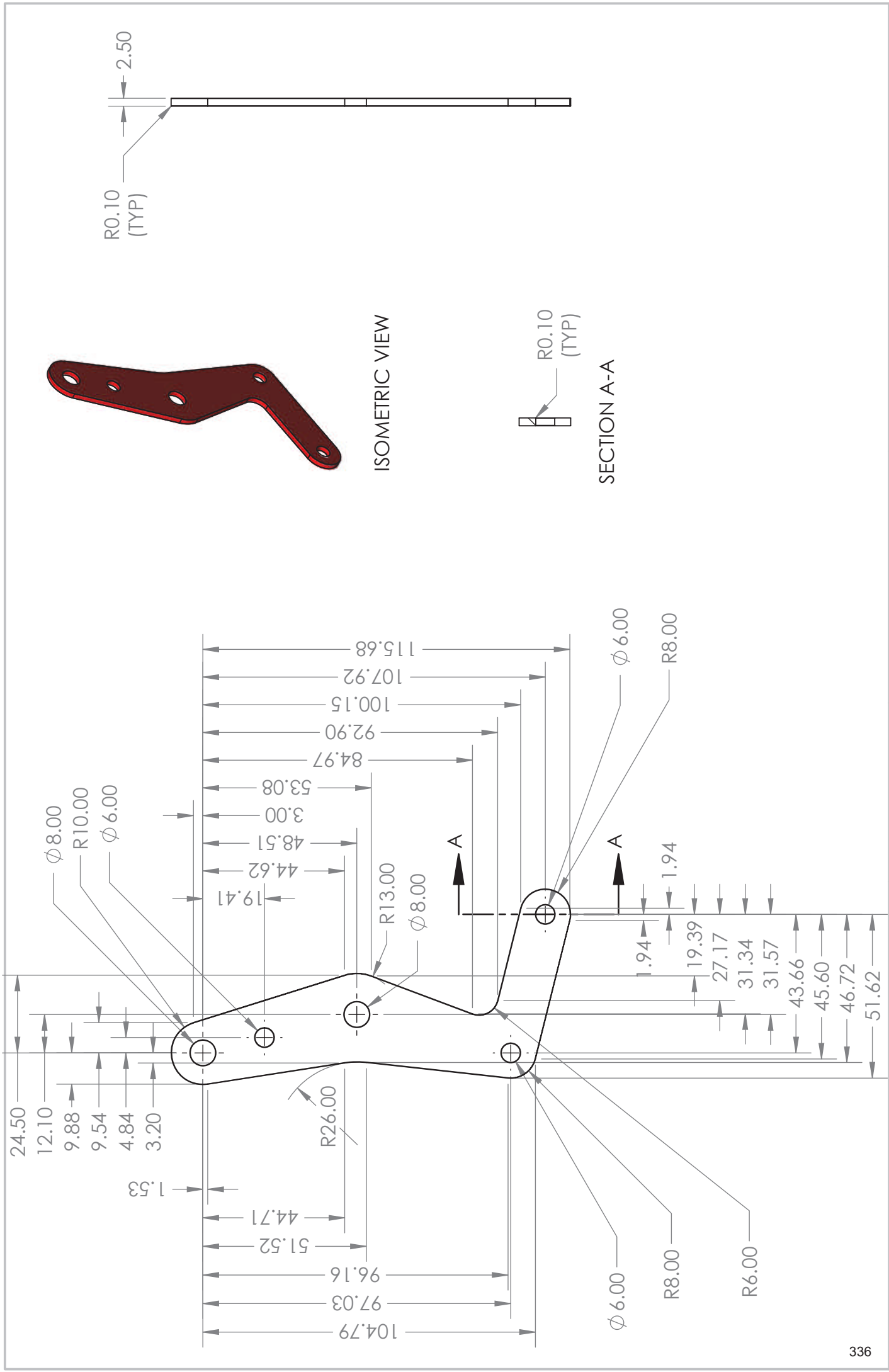
SHEET

2 OF 11

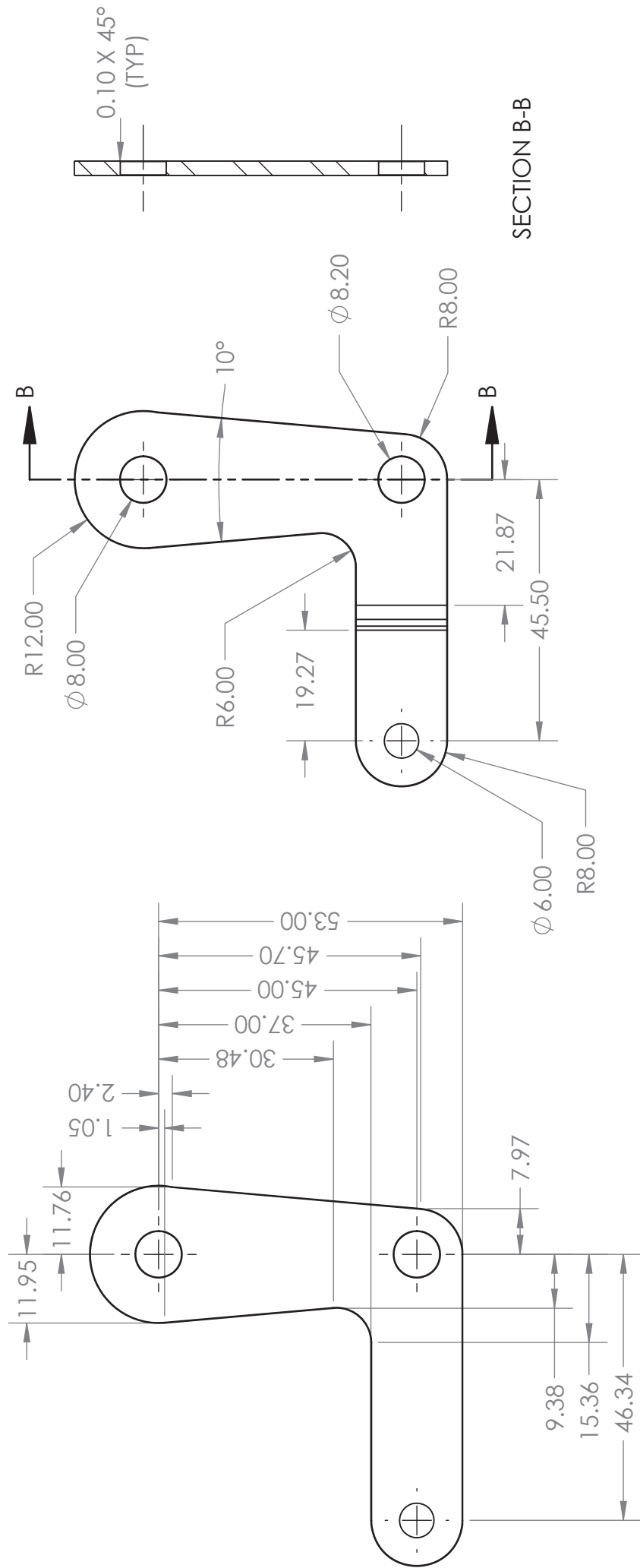
ANGLE OF PROJECTION



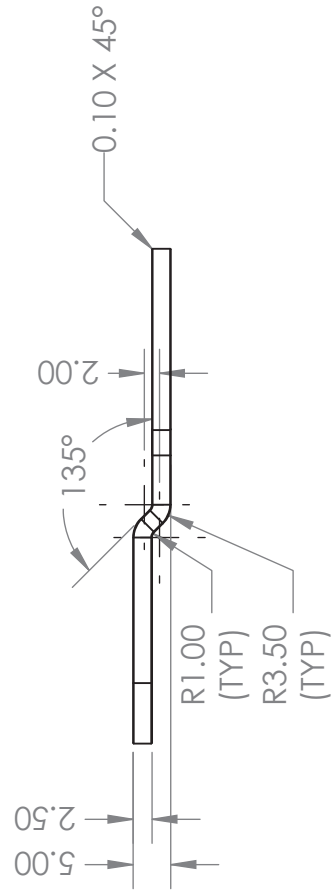
ALL DIMENSIONS ARE IN MM



DESCRIPTION.	Clamp Base	SHEET 3 OF 11	ANGLE OF PROJECTION
			ALL DIMENSIONS ARE IN MM



FLAT PATTERN VIEW



ISOMETRIC VIEW

DESCRIPTION. Clamp Elbow left

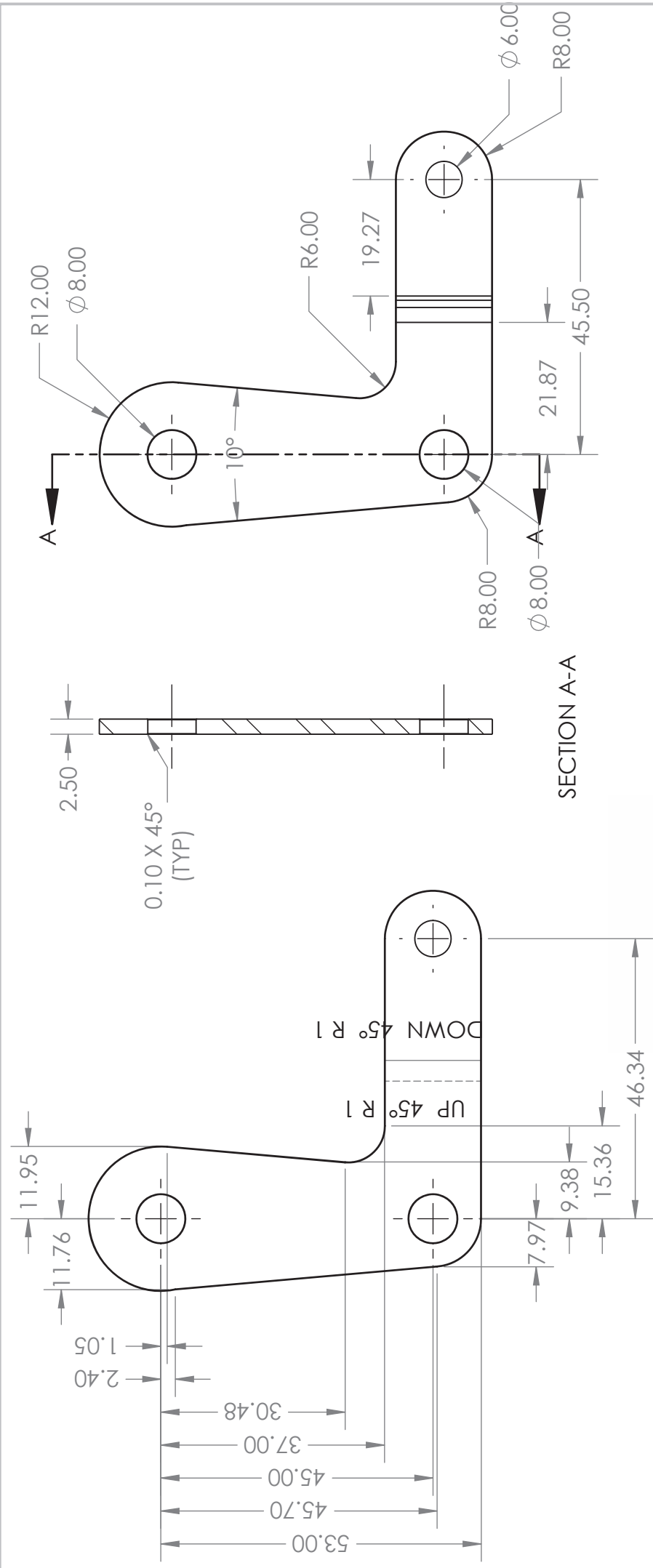
SHEET

4 OF 11

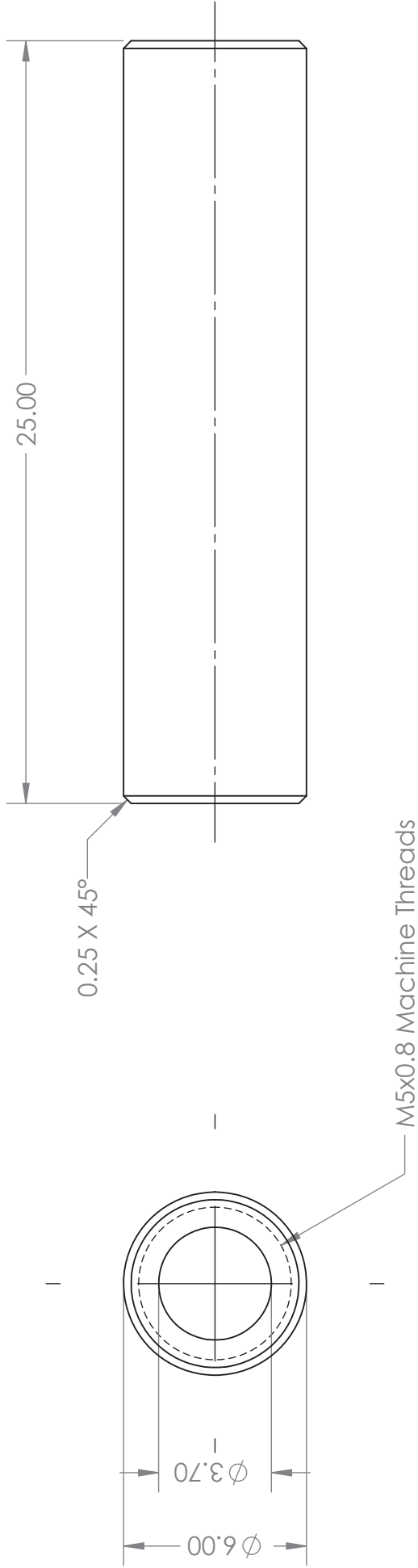
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

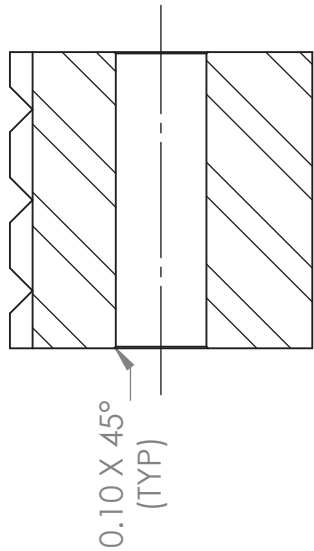


DESCRIPTION. Clamp Elbow right	SHEET 5 OF 11	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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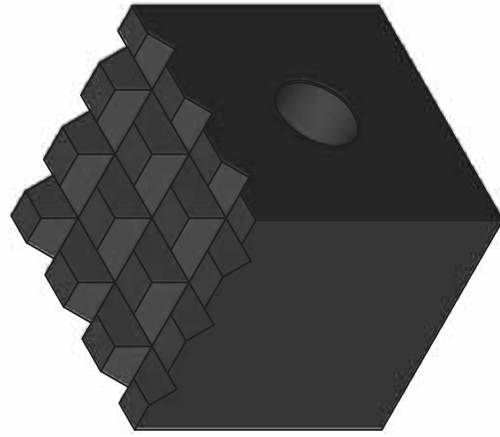
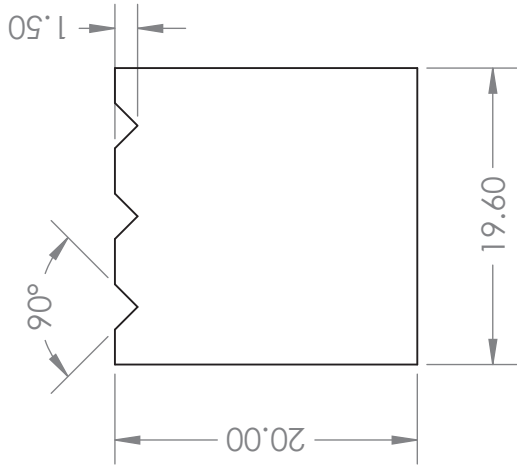
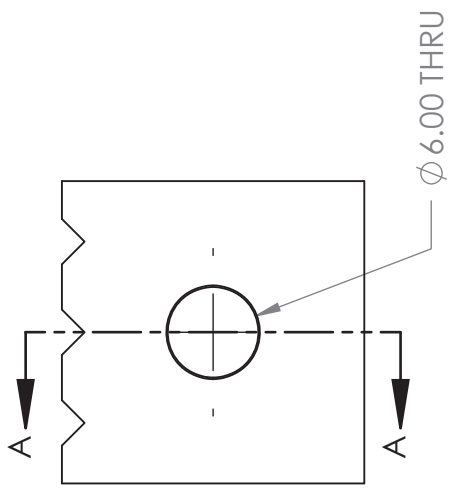


ISOMETRIC VIEW

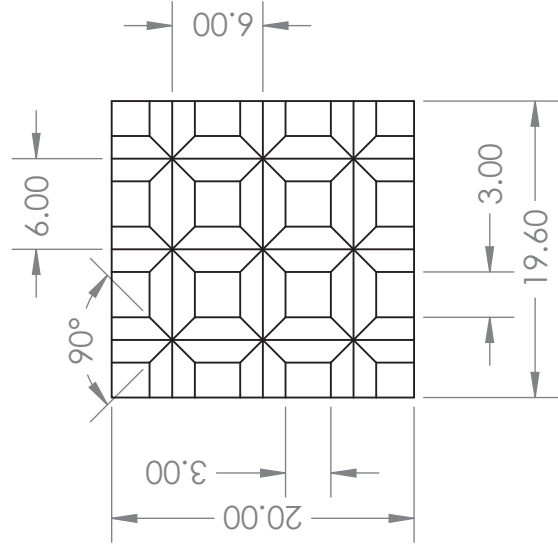
DESCRIPTION.	Clamp Foot Pin	SHEET	6 OF 11	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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SECTION A-A



ISOMETRIC VIEW



DESCRIPTION.

Clamp Foot

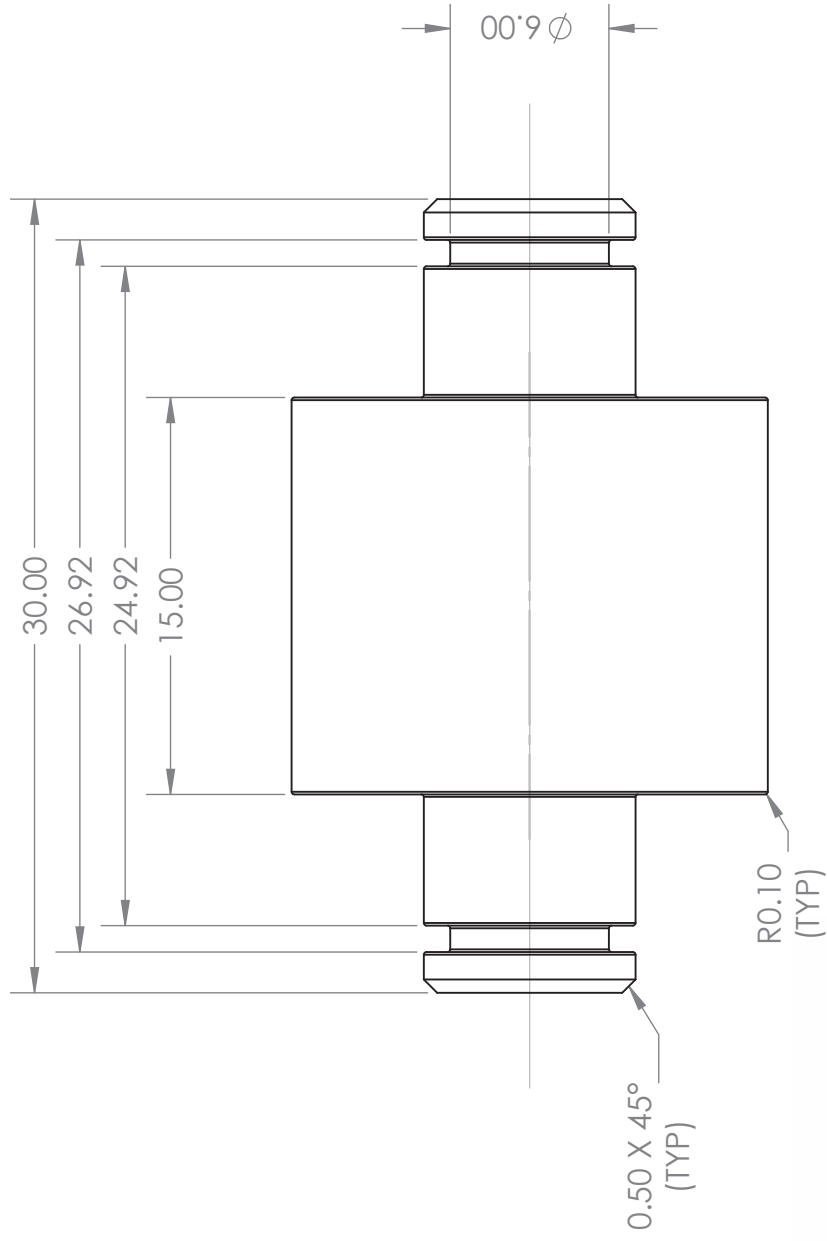
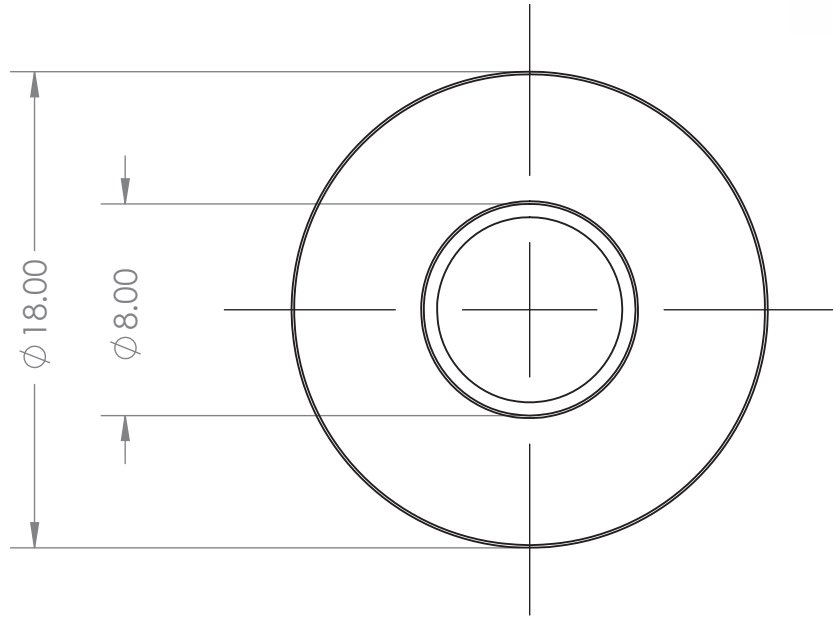
SHEET

7 OF 11

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW

DESCRIPTION. Clamp Hinge

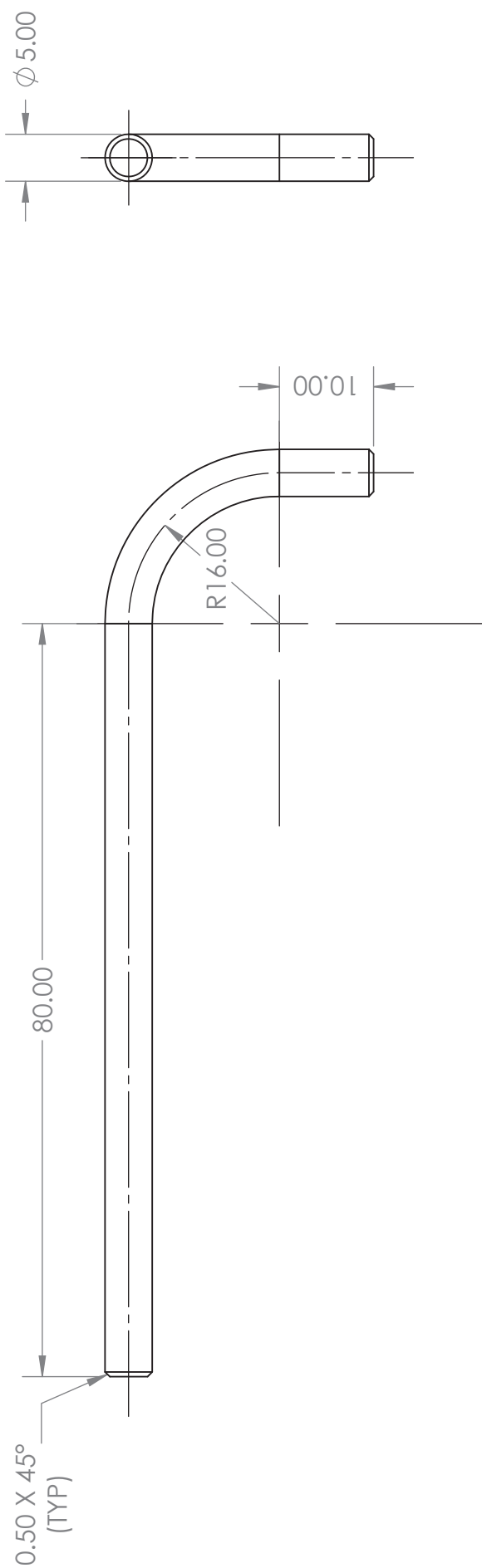
SHEET

8 OF 11

ANGLE OF PROJECTION

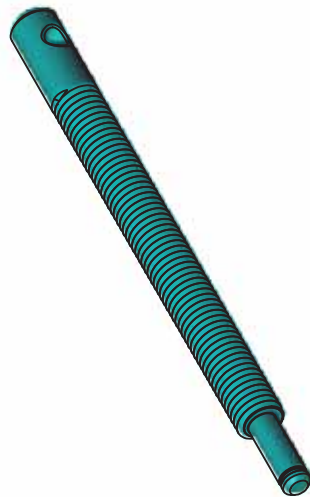


ALL DIMENSIONS ARE IN MM

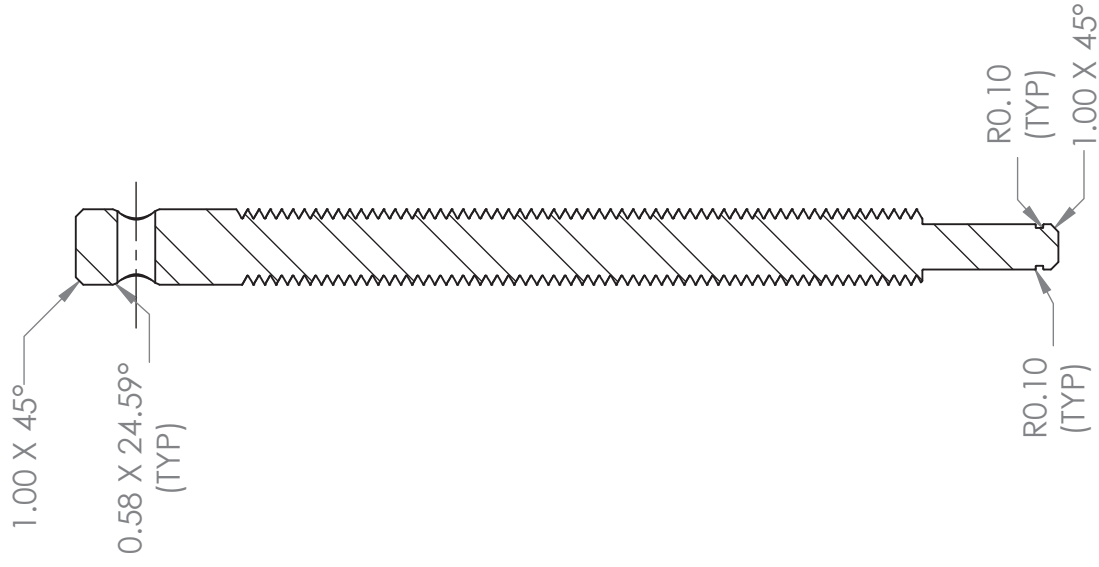
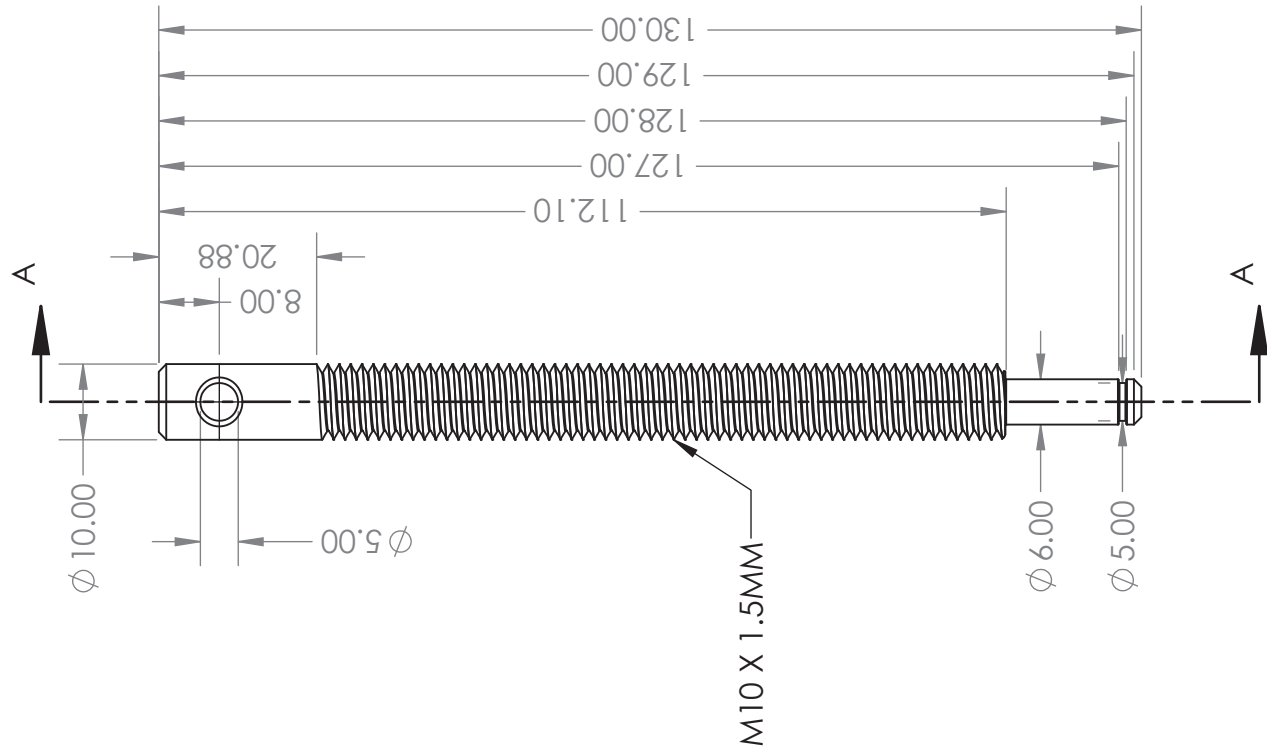


ISOMETRIC VIEW

DESCRIPTION.	Clamp Lever	SHEET	9 OF 11	ANGLE OF PROJECTION		ALL DIMENSIONS ARE IN MM
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ISOMETRIC VIEW



SECTION A-A

DESCRIPTION.

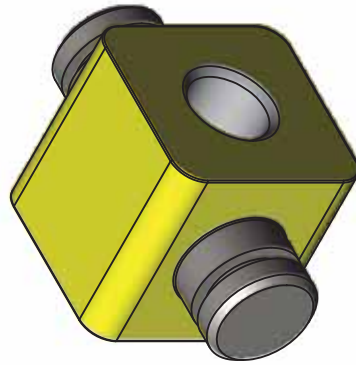
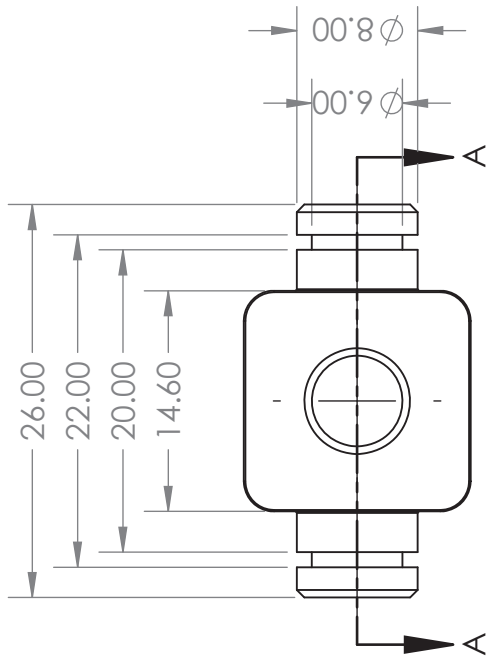
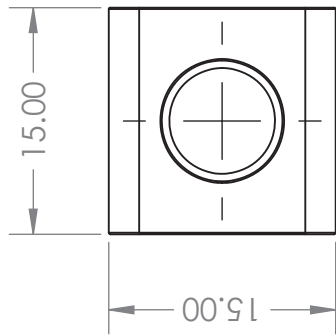
Clamp Rod

SHEET 10 OF 11

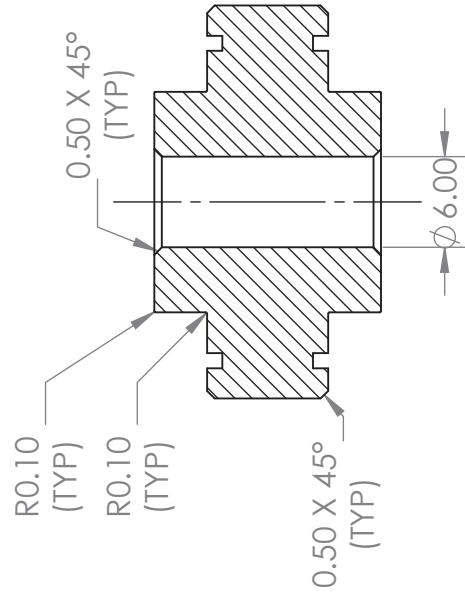
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM



ISOMETRIC VIEW



SECTION A-A

DESCRIPTION.

Clamp Tee

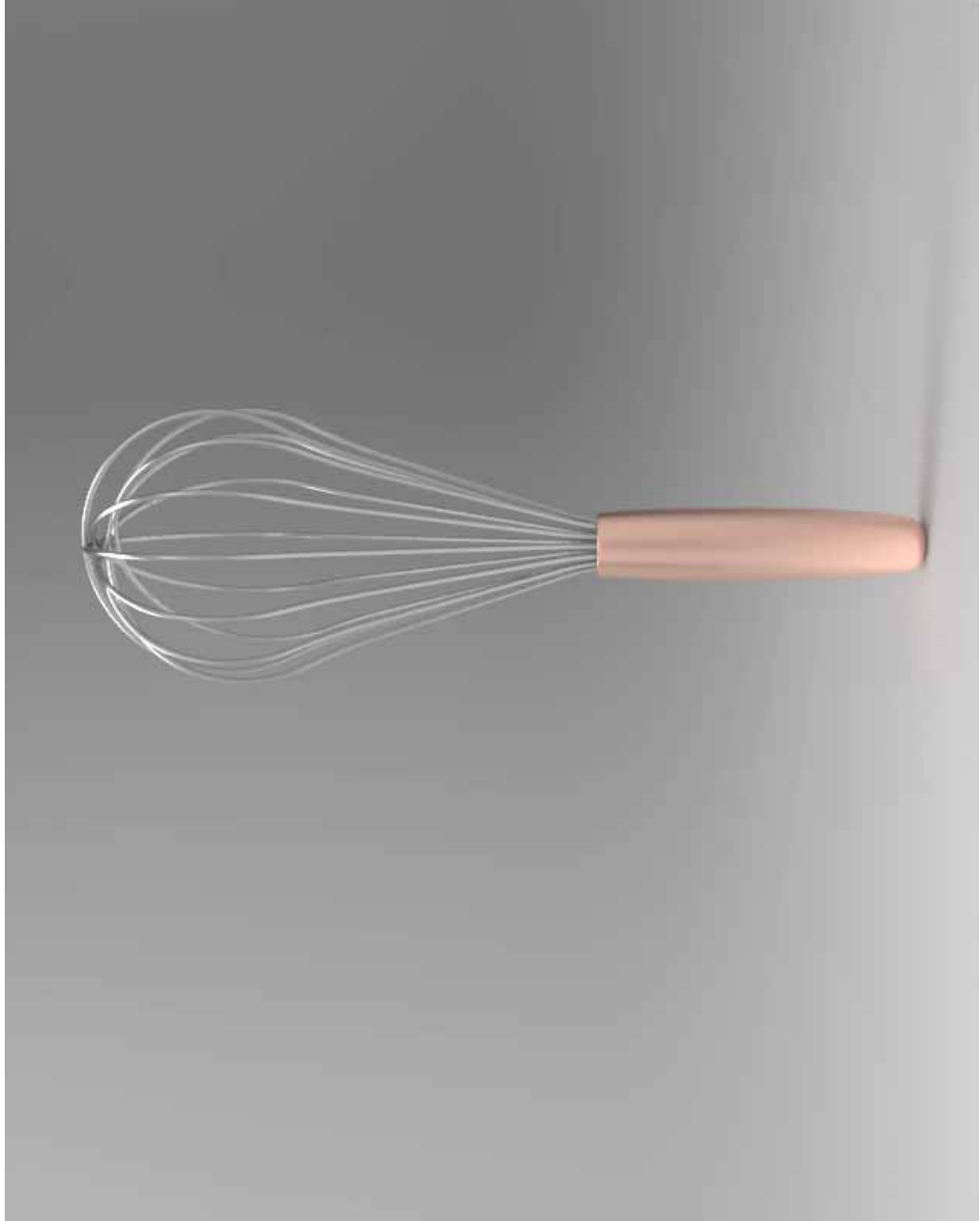
SHEET 11 OF 11

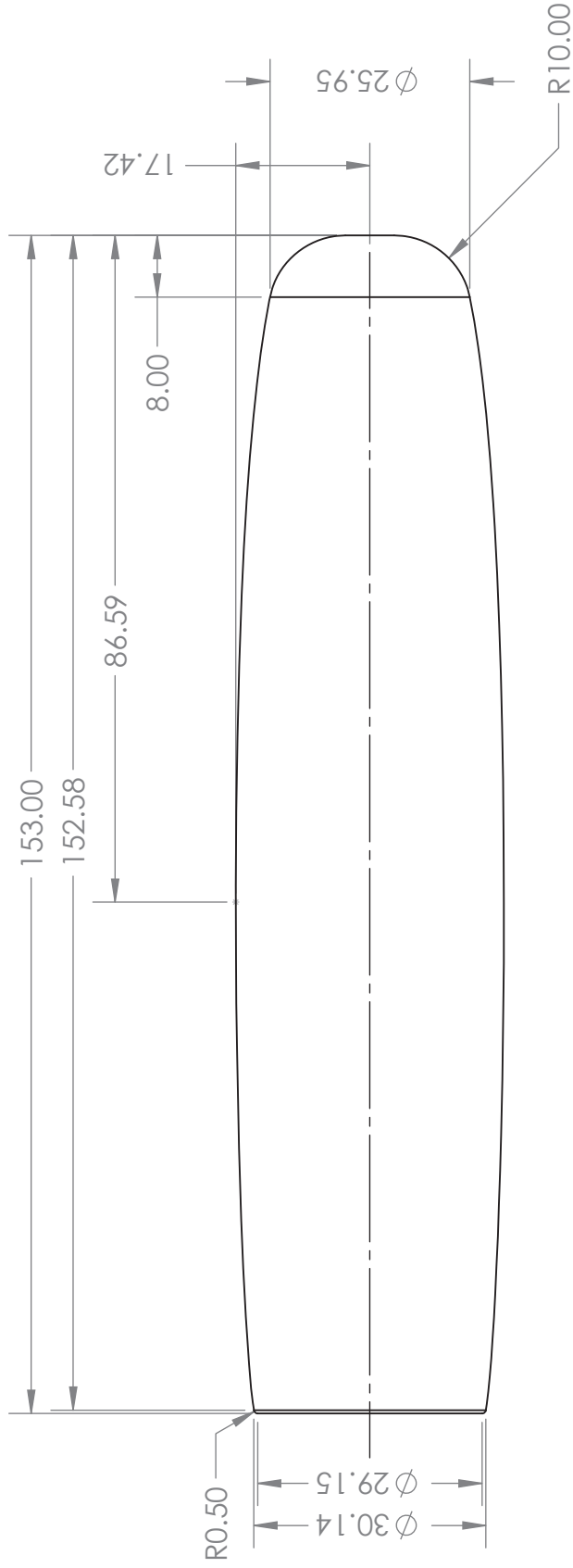
ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

WHIPPER





ISOMETRIC VIEW

DESCRIPTION. WHIPPER HANDLE

SHEET

1 OF 2

ANGLE OF PROJECTION



ALL DIMENSIONS ARE IN MM

Wishing you all
The Very Best.