

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

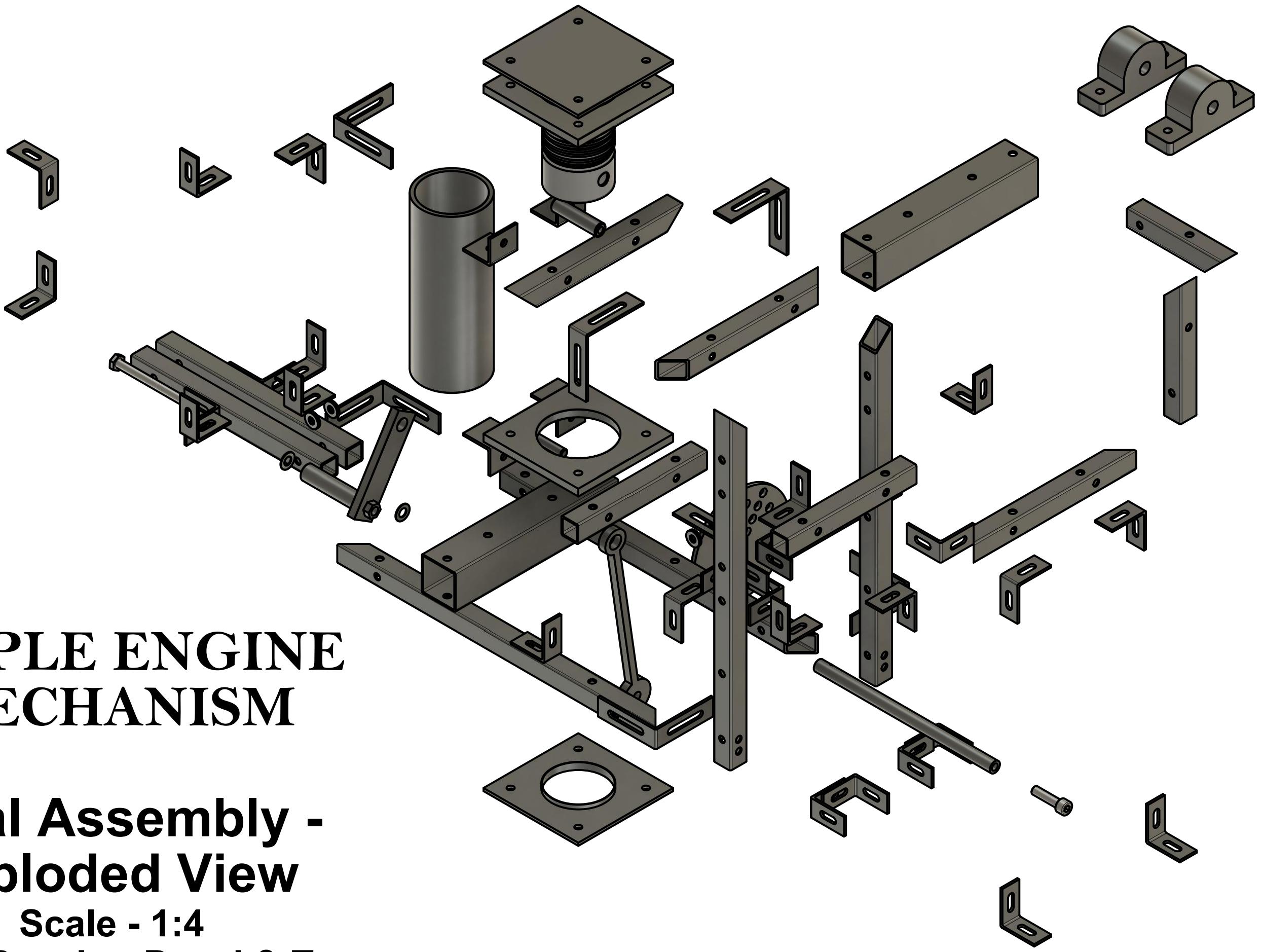
D

E

E

F

F



## SIMPLE ENGINE MECHANISM

**Final Assembly -  
Exploded View**

Scale - 1:4

Created By - Jog Desai & Team

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

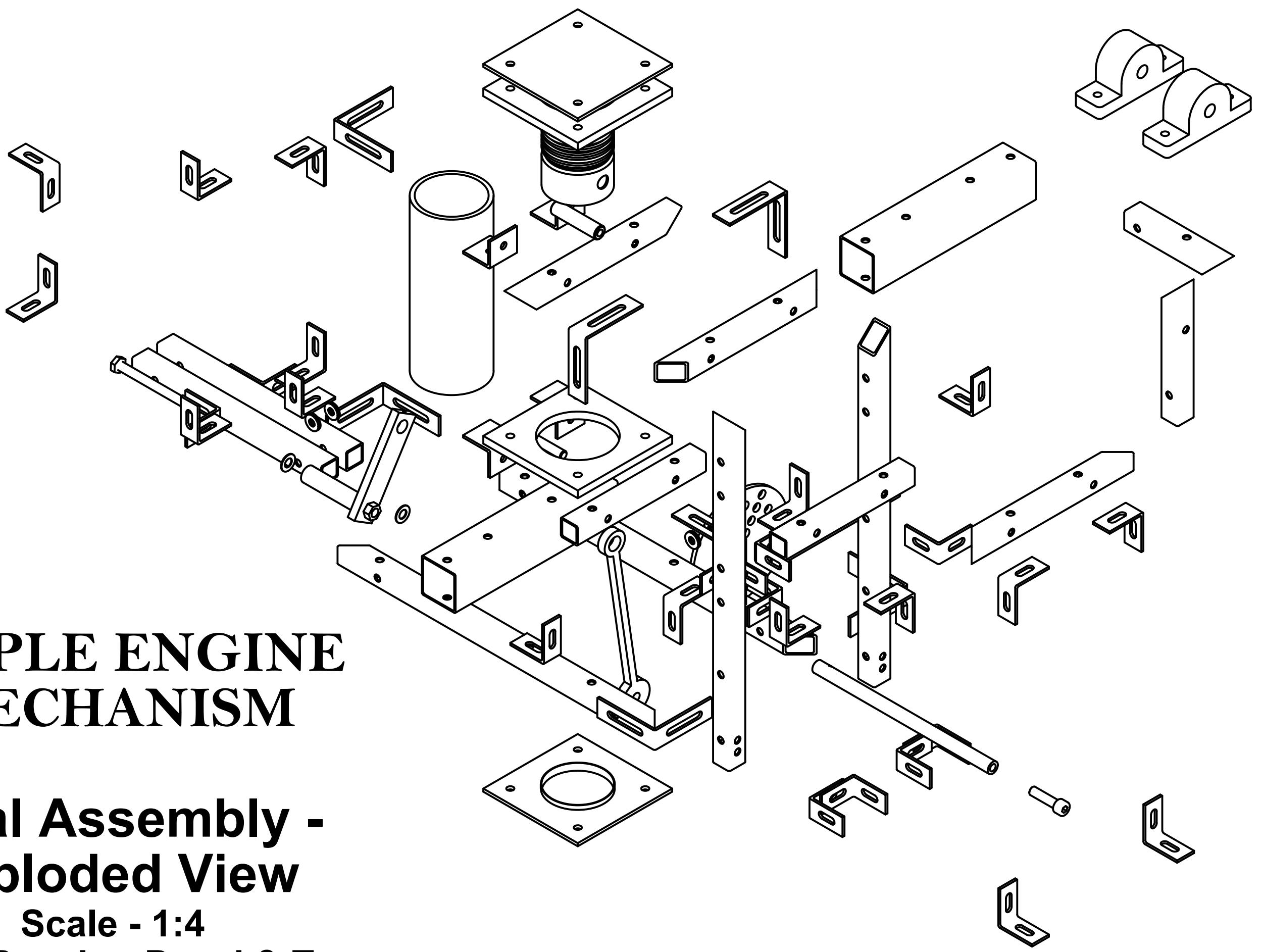
D

E

E

F

F

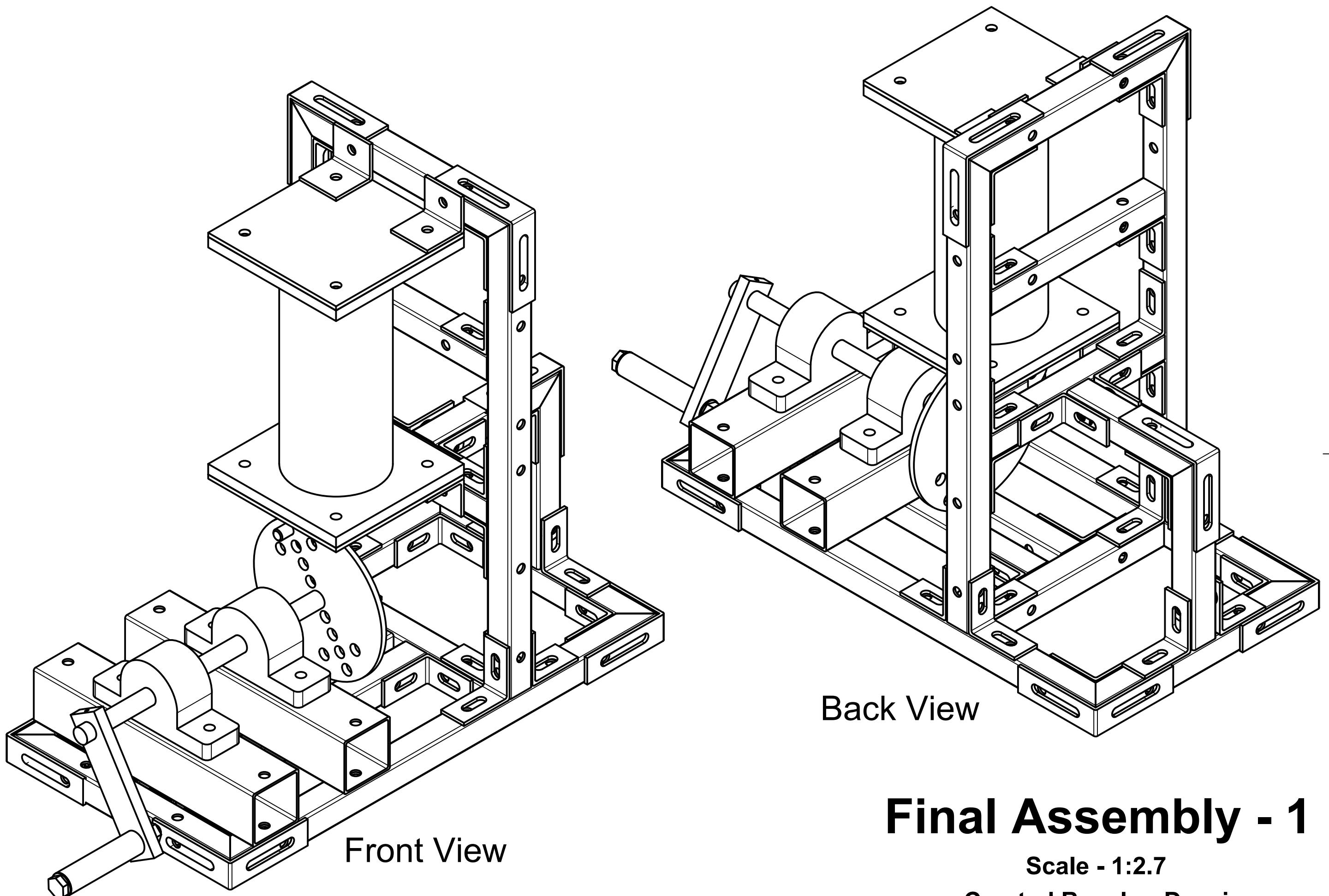


## SIMPLE ENGINE MECHANISM

**Final Assembly -  
Exploded View**

Scale - 1:4

Created By - Jog Desai & Team



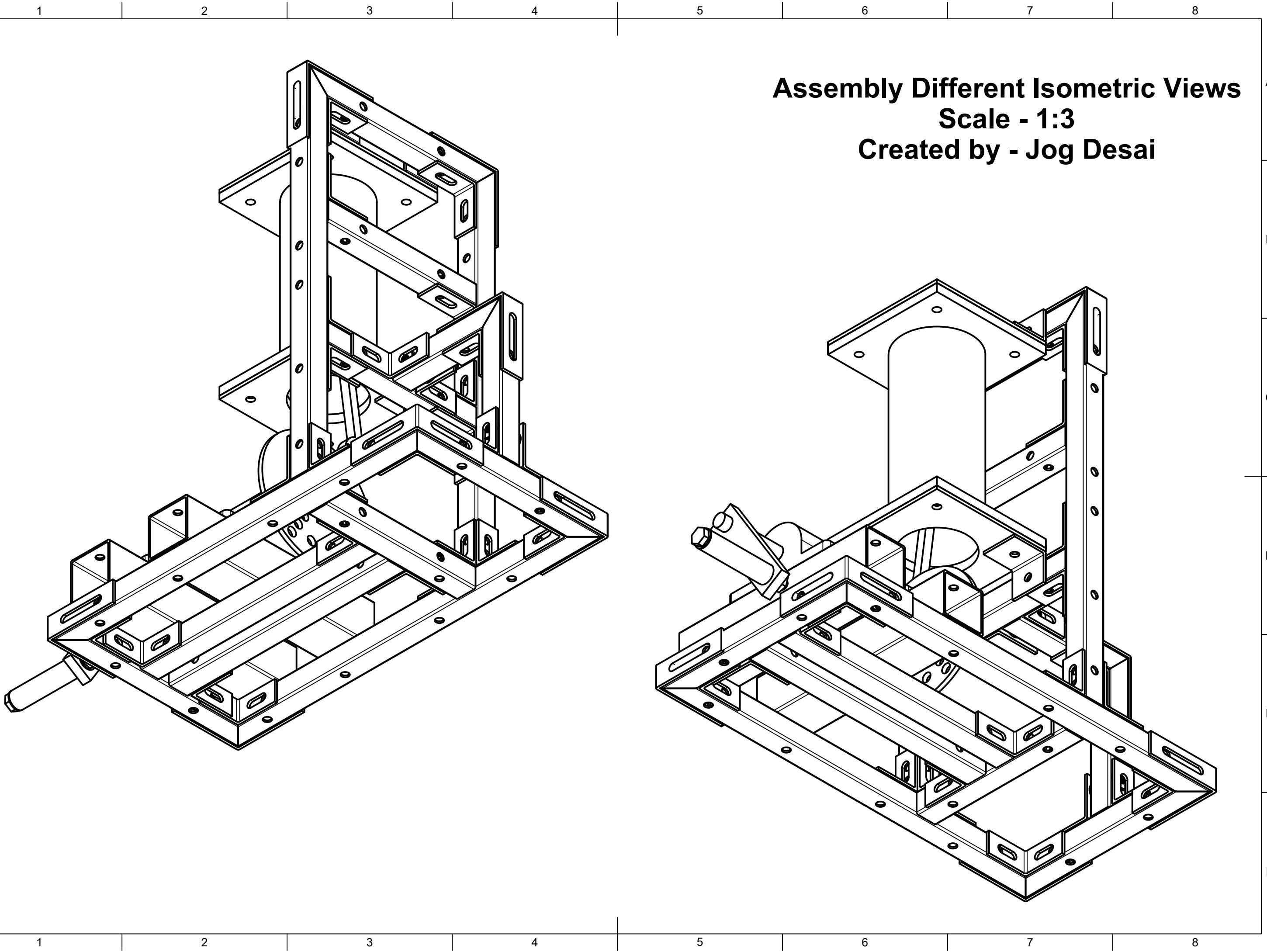
Front View

Back View

# Final Assembly - 1

Scale - 1:2.7

Created By - Jog Desai



**Assembly Different Isometric Views**  
Scale - 1:3  
Created by - Jog Desai

1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

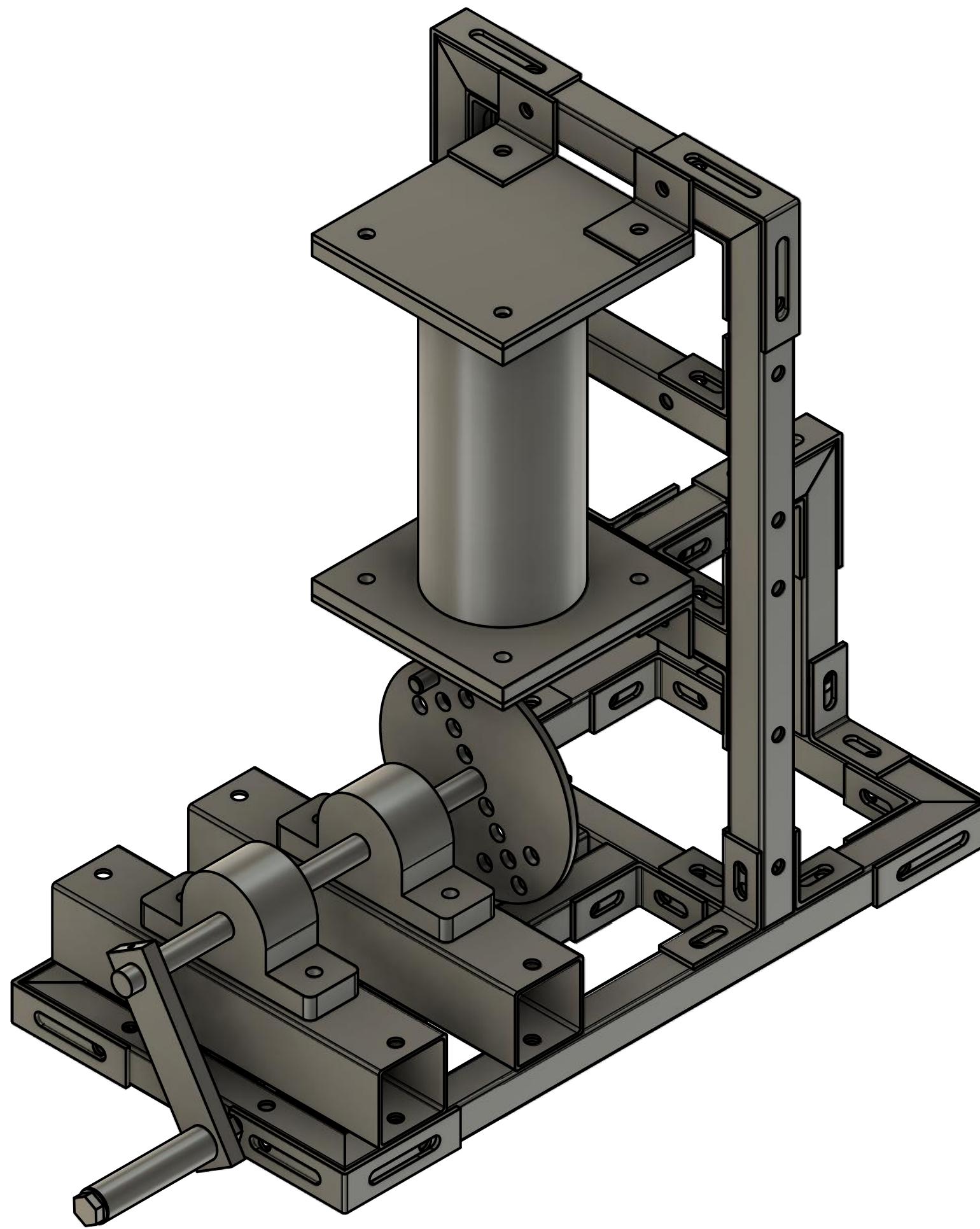
B

C

D

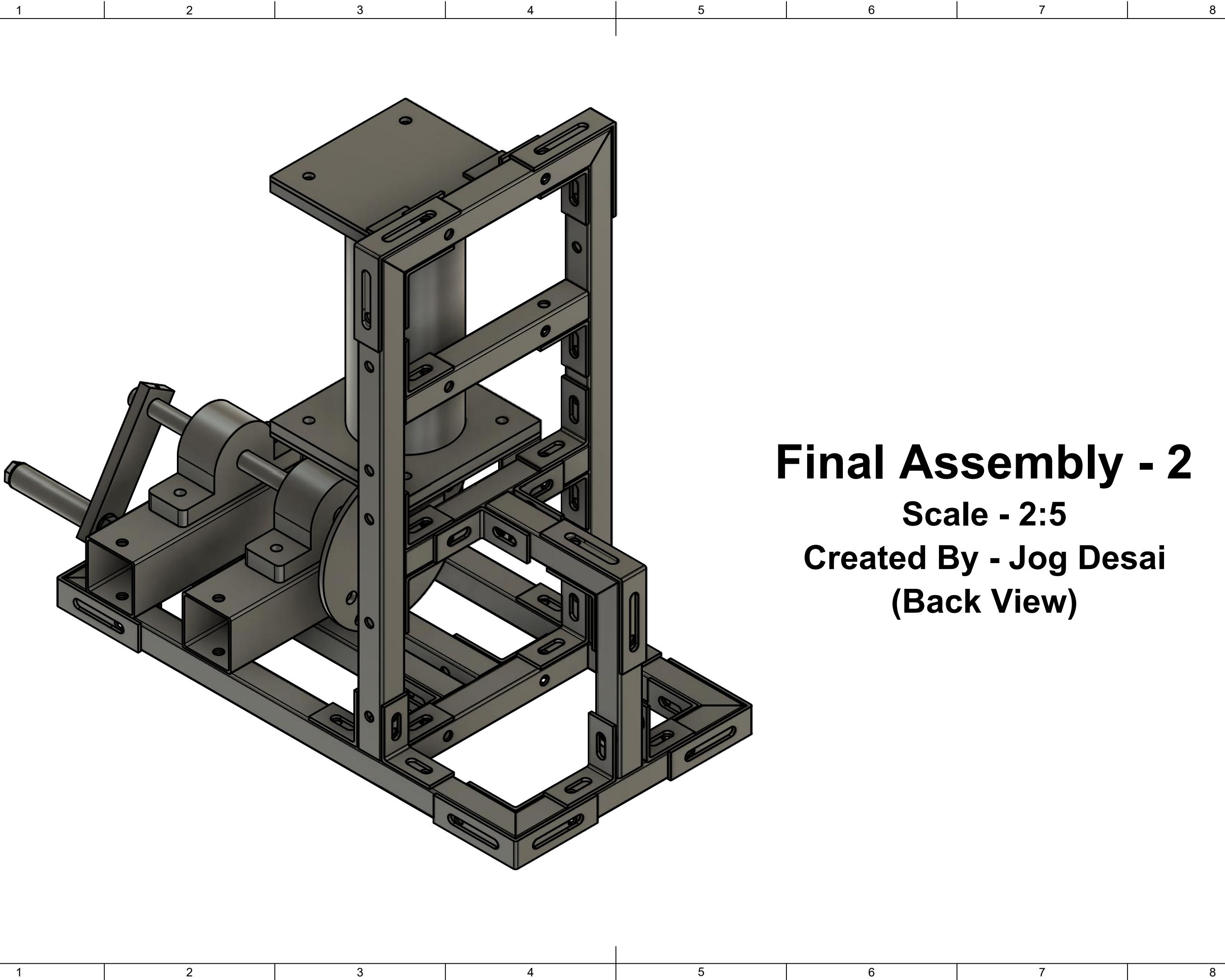
E

F

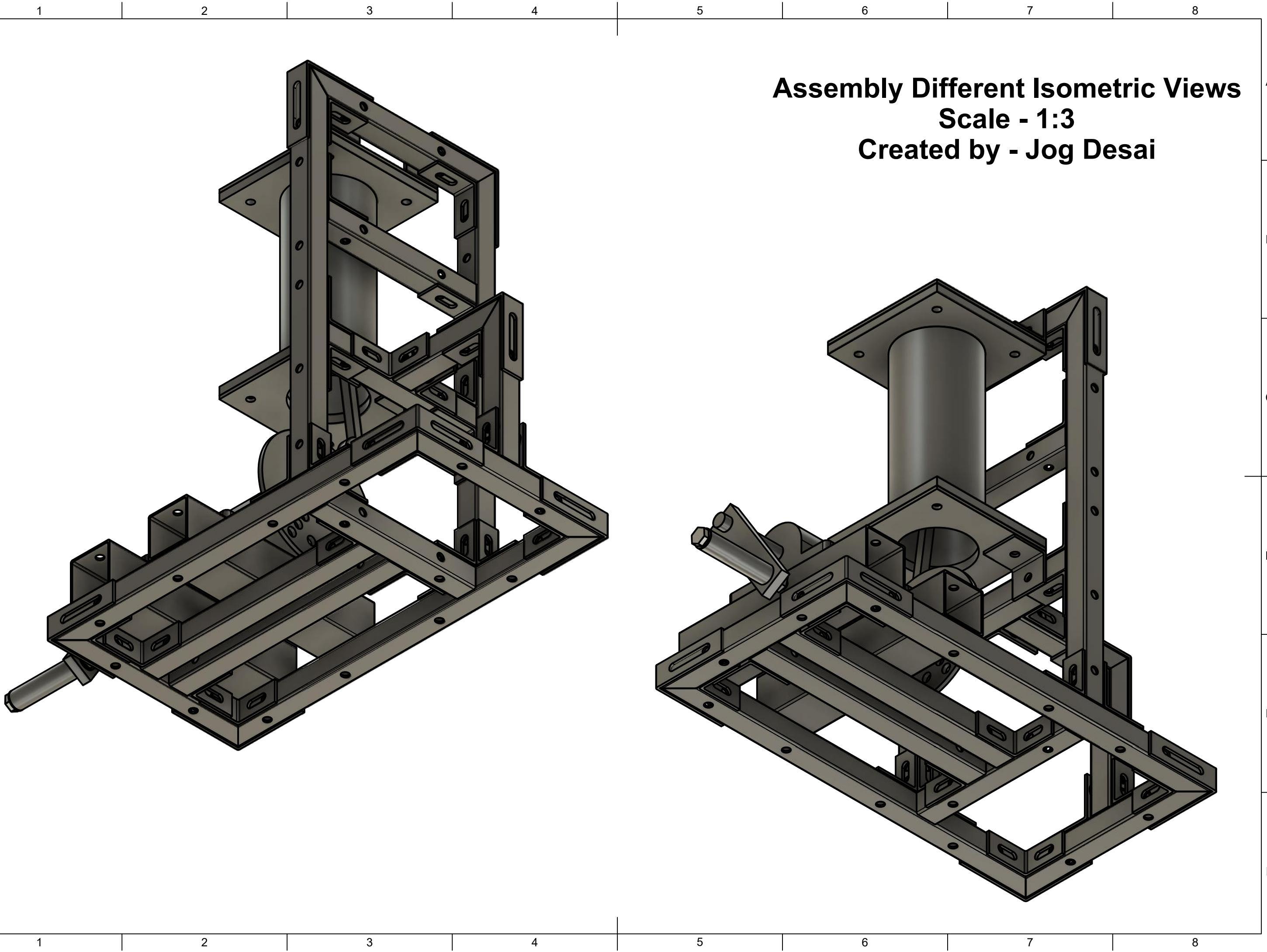


**Final Assembly - 2**  
**Scale - 2:5**  
**Created By - Jog Desai**  
**(Front View)**

1 2 3 4 5 6 7 8



**Final Assembly - 2**  
Scale - 2:5  
Created By - Jog Desai  
(Back View)



1 2 3 4 5 6 7 8

A

B

C

D

E

F

A

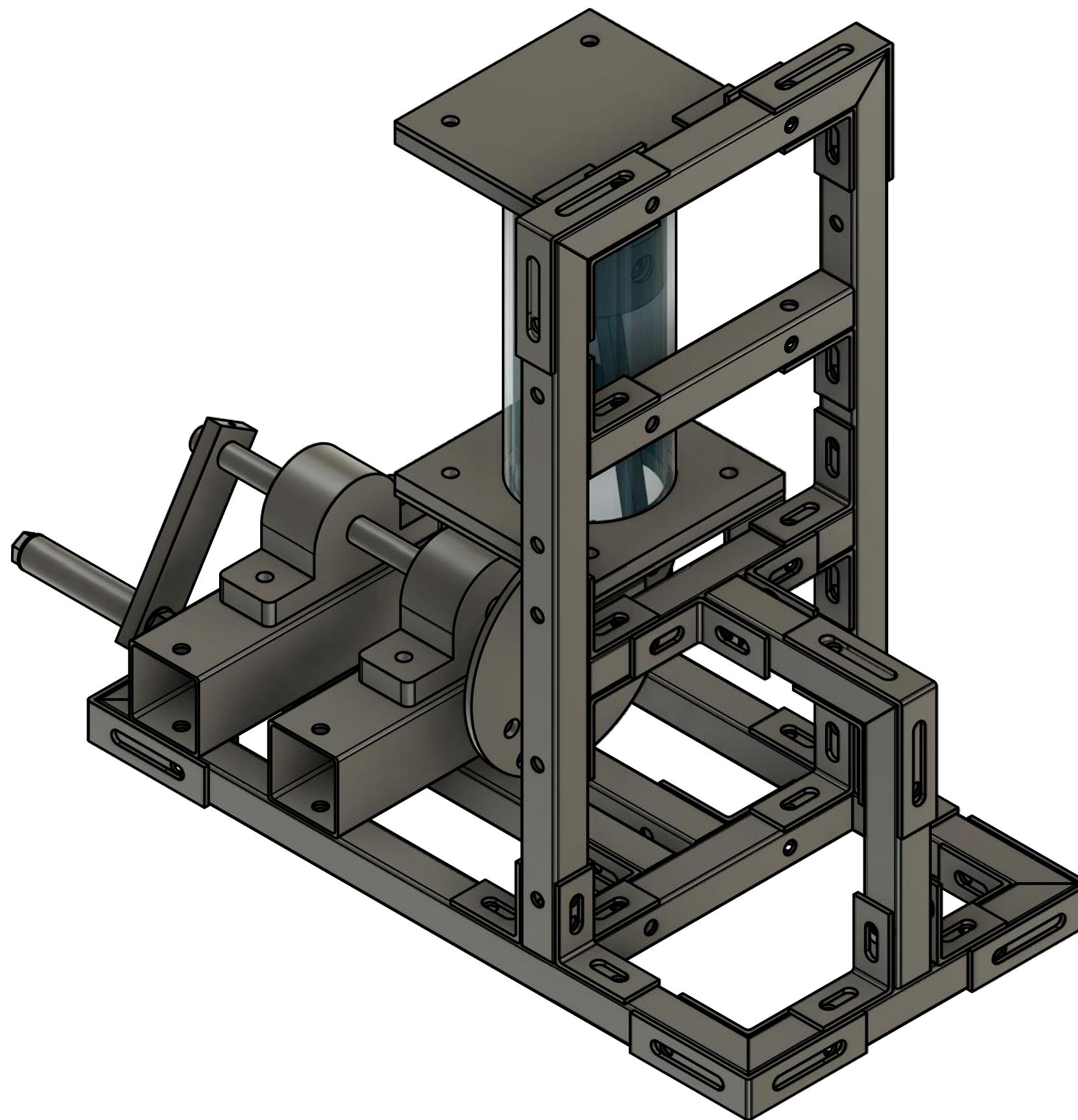
B

C

D

E

F



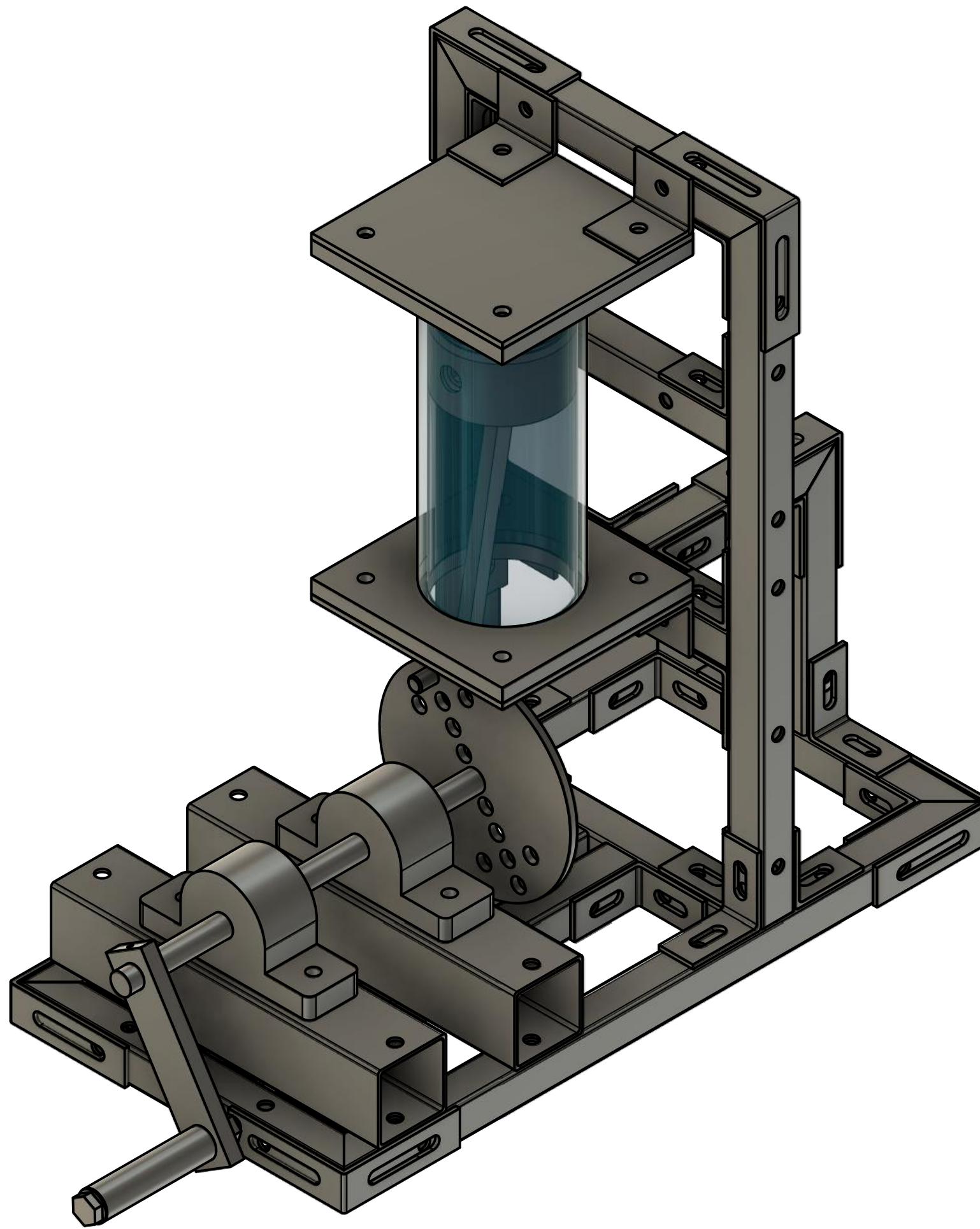
**Final Assembly - 3**  
**Scale - 2:5**  
**Created By - Jog Desai**  
**(Back View)**

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

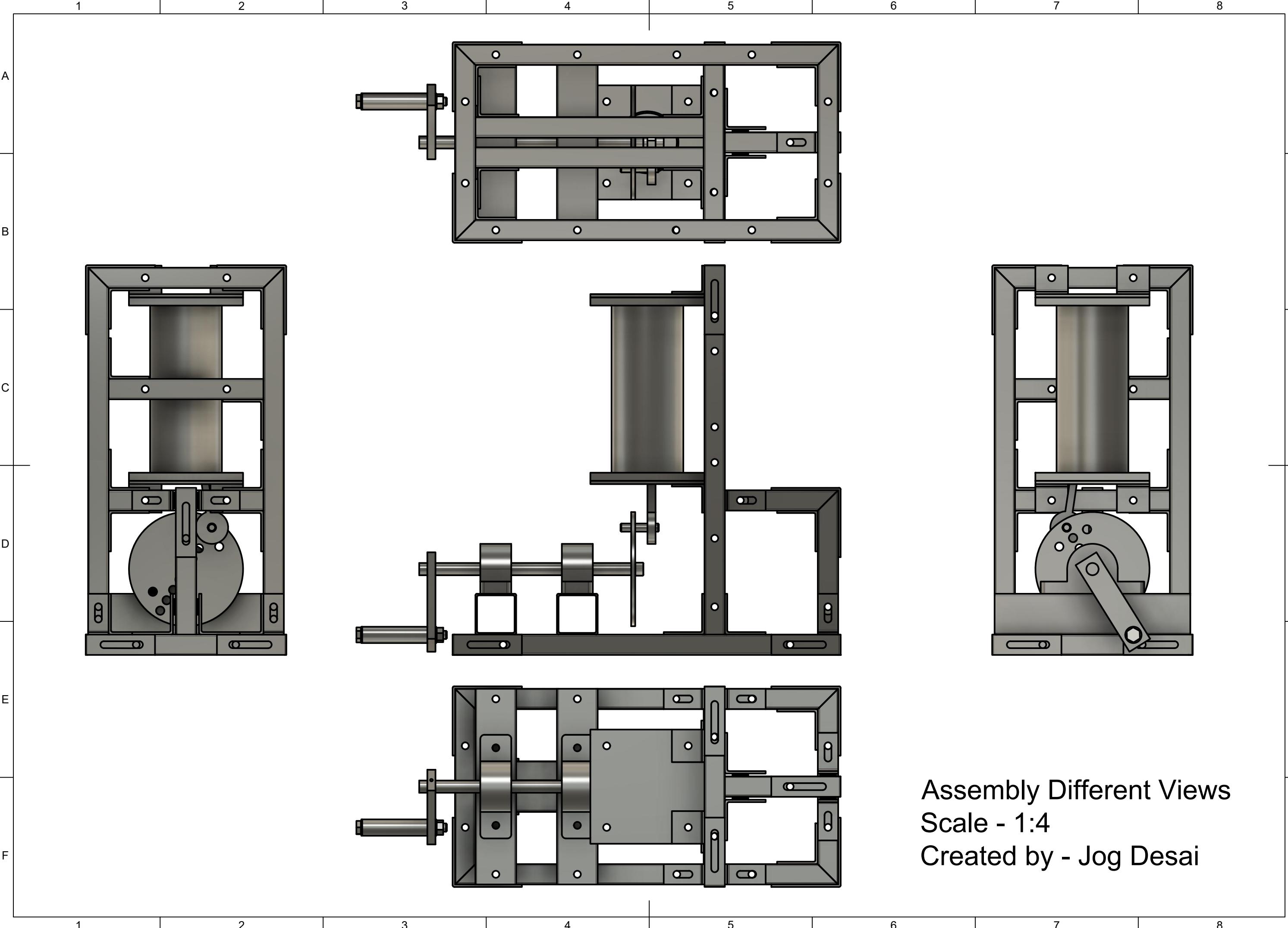
A  
B  
C  
D  
E  
F

A  
B  
C  
D  
E  
F



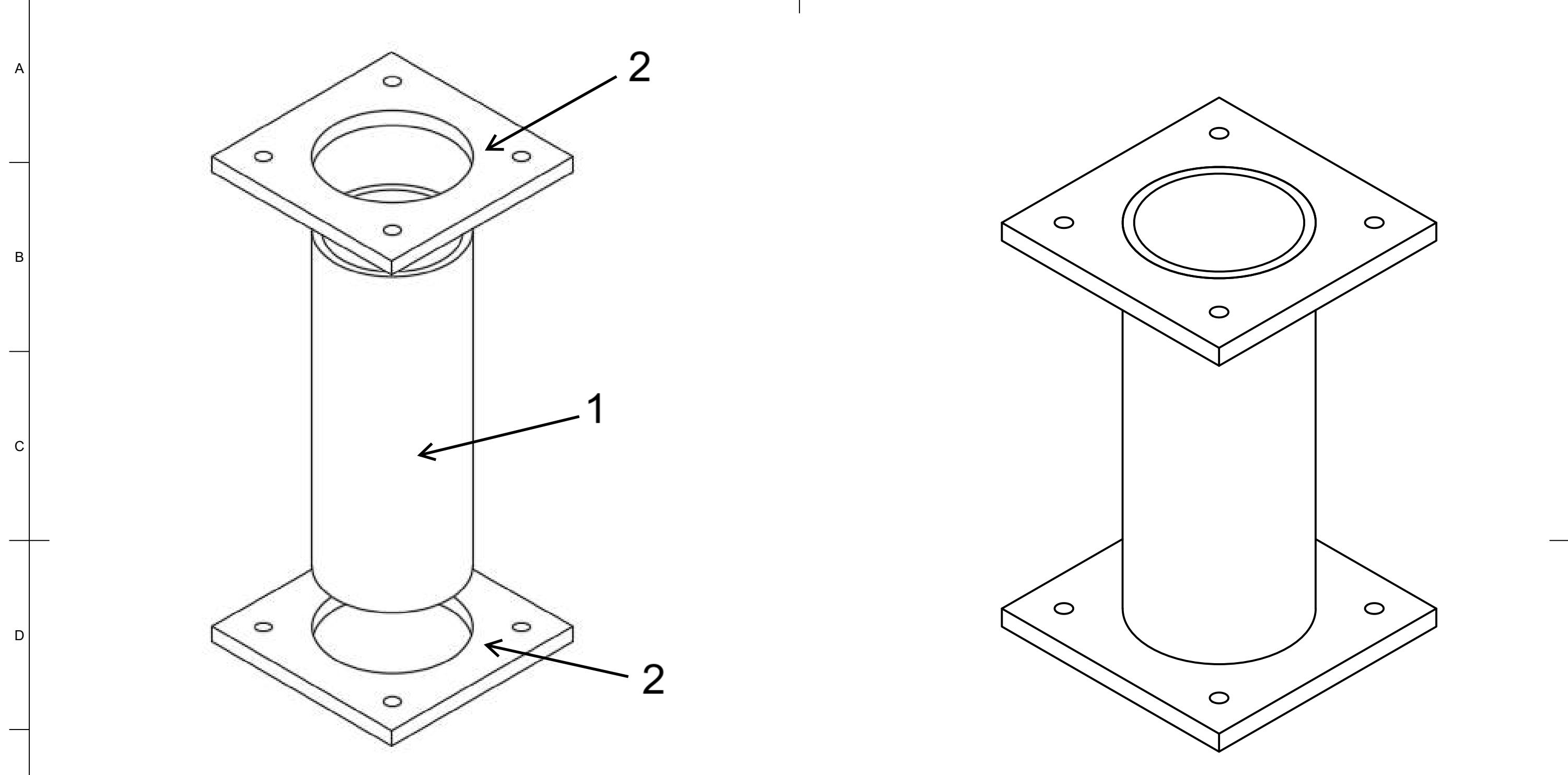
**Final Assembly - 3**  
Scale - 2:5  
Created By - Jog Desai  
(Front View)

1 2 3 4 5 6 7 8



Assembly Different Views  
Scale - 1:4  
Created by - Jog Desai

1 2 3 4 5 6 7 8



**Exploded View**

**Cylinder Assembly**

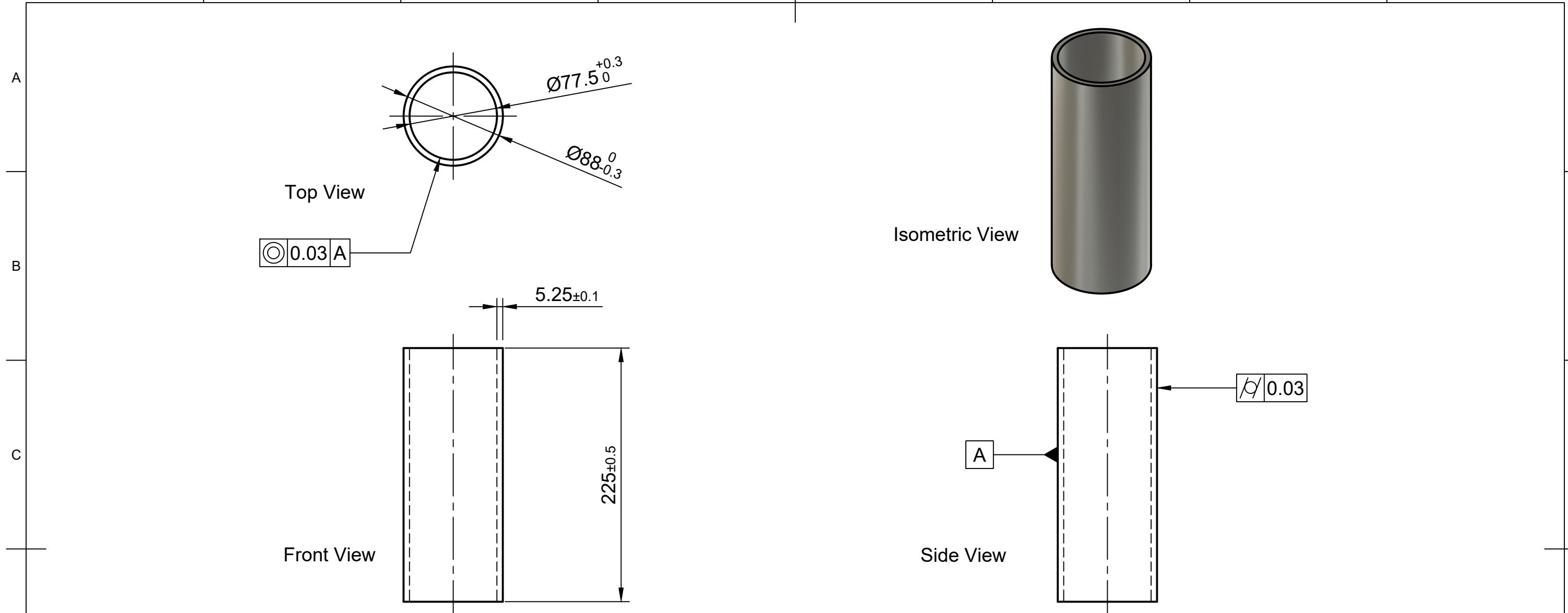
**Cylinder Assembly**

(Joint Type - Welding)

Sr No.	Part No.	Description	Quantity	Dimensions	Material
1	SEM01	Cylinder Pipe	1	225 mm x 88 mm x 5.25 mm	Mild Steel
2	SEM12	Cylinder Plate	2	140 mm x 140 mm x 10 mm	Mild Steel

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8



SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM01</b>	<b>Cylinder Pipe</b>	01	225 mm x 88 mm x 5.25 mm	Mild Steel

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 2.42 Kg

DEBURR AND BREAK SHARP EDGES  
DO NOT SCALE DRAWING

**AHMEDABAD UNIVERSITY**  
**SCHOOL OF ENGINEERING**  
**AND APPLIED SCIENCE**

IF IN DOUBT, ASK

DRN: Jog Desai | Date: 03-12-2023 | MEC405 LEARNING FACTORY PROJECT

Default Tolerance table as per IS:2102

CHD: Jog Desai | Date: 03-12-2023 | TITLE: Cylinder Pipe | Part No: SEM01

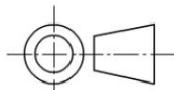
Welded Construction

Class

Machined and Formed

APD

Jog Desai | Date: 03-12-2023



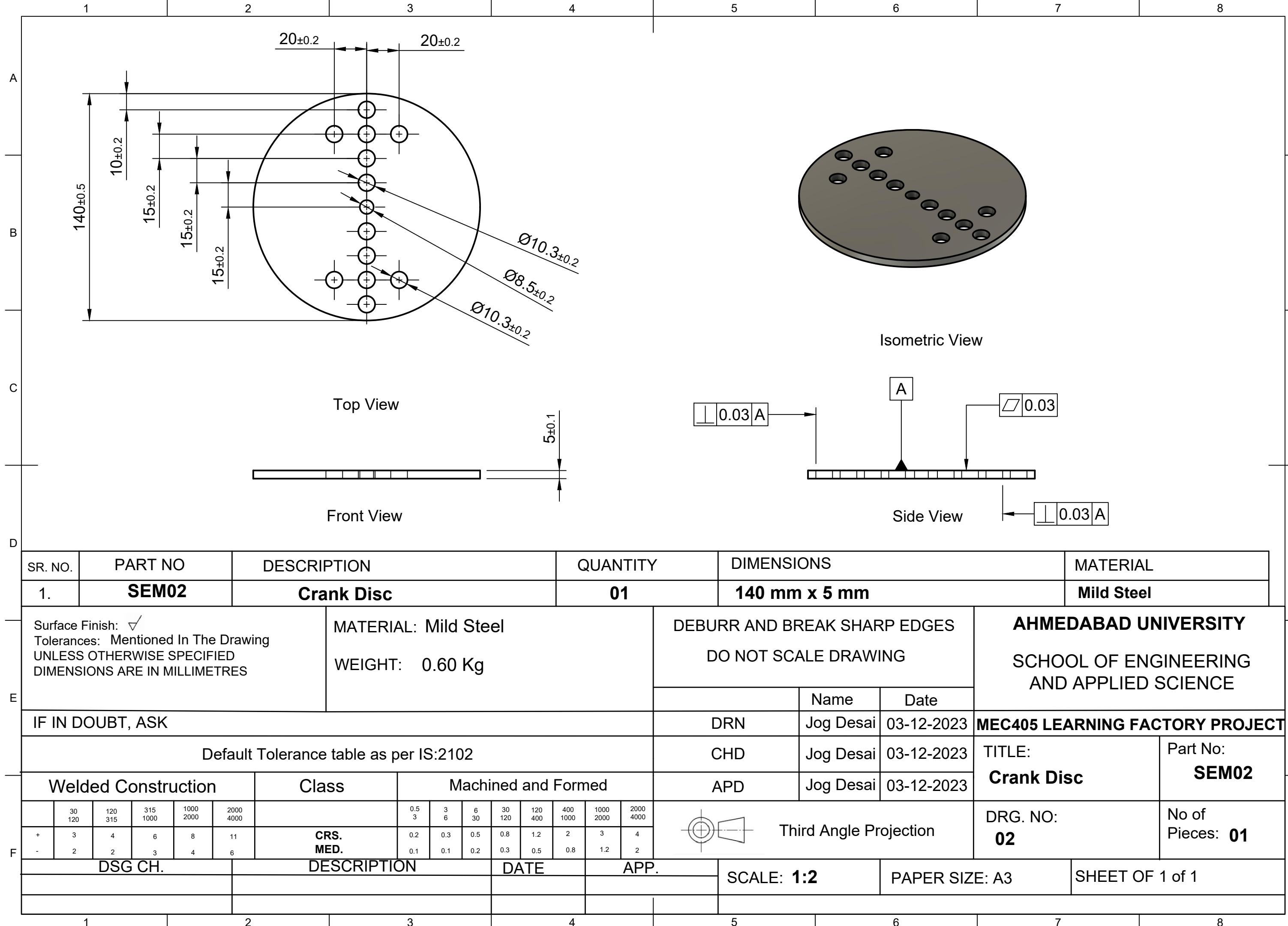
Third Angle Projection

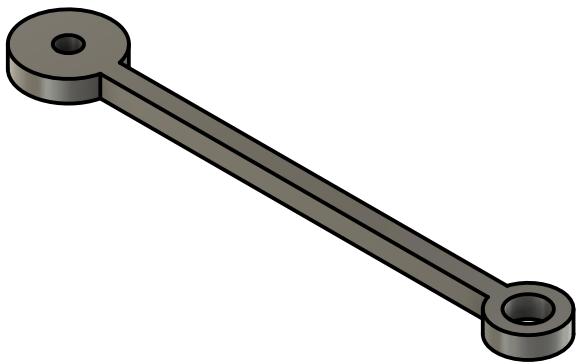
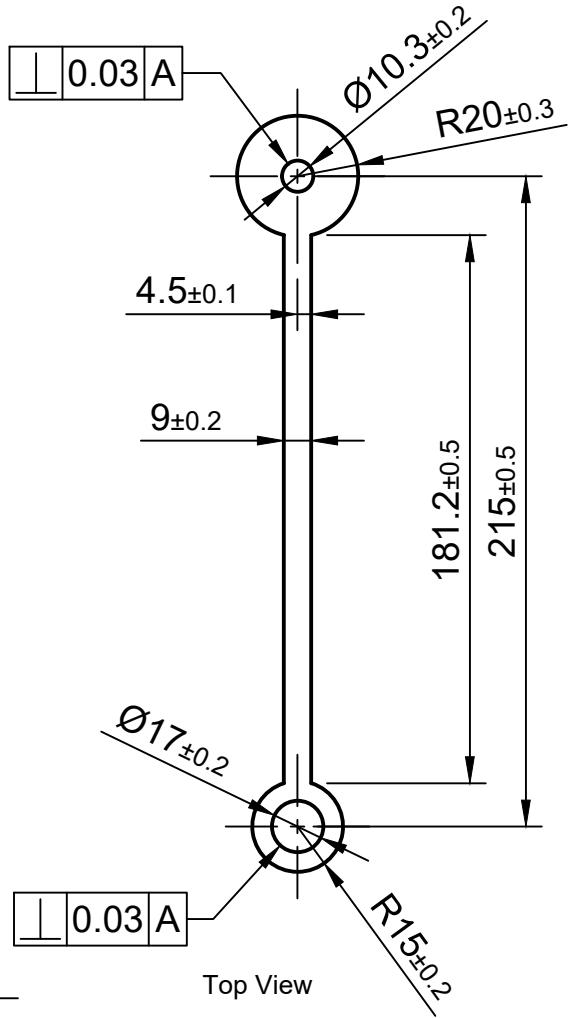
DRG. NO:  
**01**

No of  
Pieces: **01**

DSG CH.						DESCRIPTION		DATE		APP.		SCALE: 2:7	PAPER SIZE: A3	SHEET OF 1 of 1

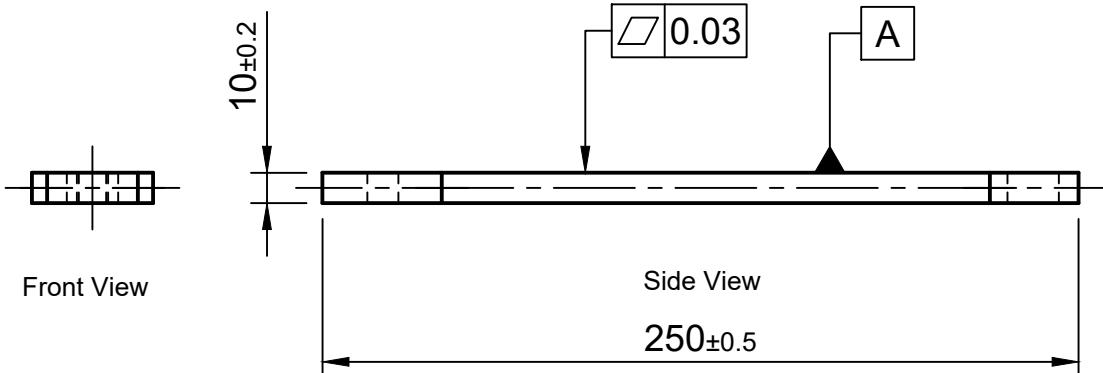
1 2 3 4 5 6 7 8





Top View

Isometric View



Front View

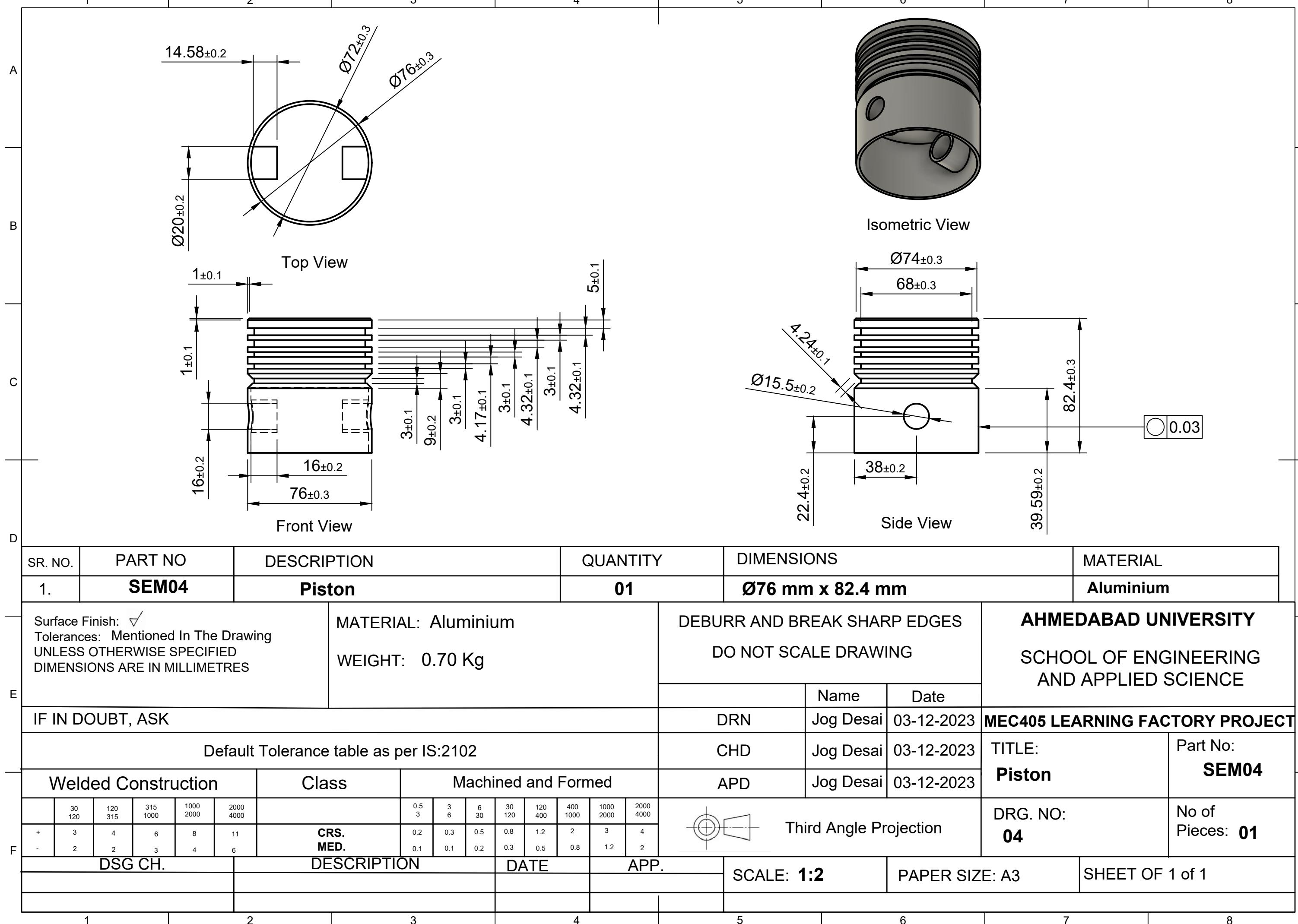
Side View

$250 \pm 0.5$

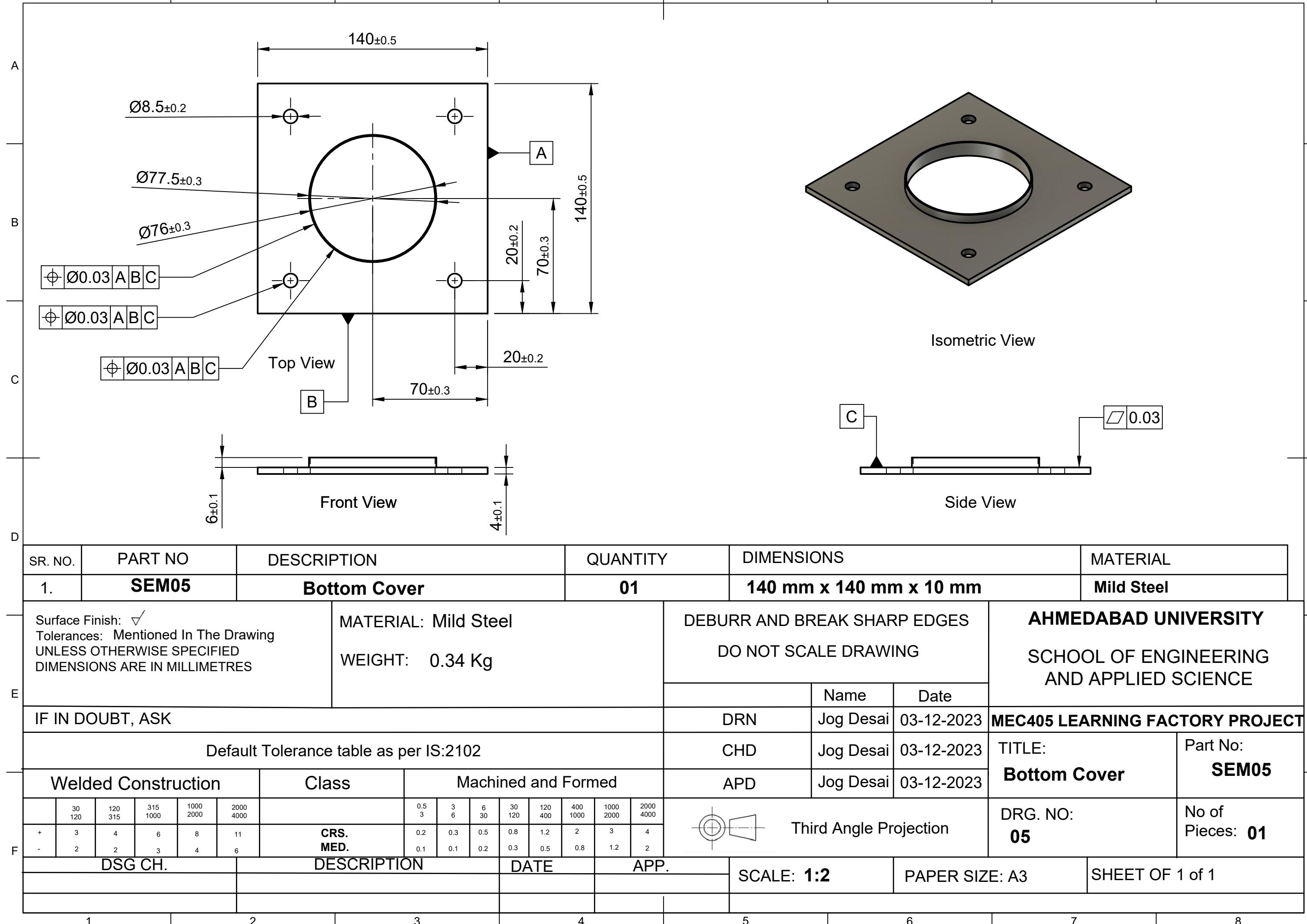
SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	SEM03	Piston Rod	01	250 mm x 40 mm x 10 mm	Mild Steel
Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES		MATERIAL: Mild Steel WEIGHT: 0.260 Kg	DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING		AHMEDABAD UNIVERSITY SCHOOL OF ENGINEERING AND APPLIED SCIENCE
IF IN DOUBT, ASK			DRN	Jog Desai 03-12-2023	MEC405 LEARNING FACTORY PROJECT
Default Tolerance table as per IS:2102			CHD	Jog Desai 03-12-2023	TITLE: <b>Piston Rod</b>
Welded Construction		Class	Machined and Formed		Part No: <b>SEM03</b>
30 120	120 315	316 1000	3000 2000	1200 4000	0.9 3 3 6 30 30 120 400 4000 1000 2000 2000 4000
+ 3 - 2	4 2	6 3	8 4	11 6	0.2 0.1 0.3 0.2 0.5 0.3 0.8 1.2 2 3 4 2
DSG CH.		DESCRIPTION	DATE	APP.	SCALE: 2:5 PAPER SIZE: A4 SHEET OF 1 of 1

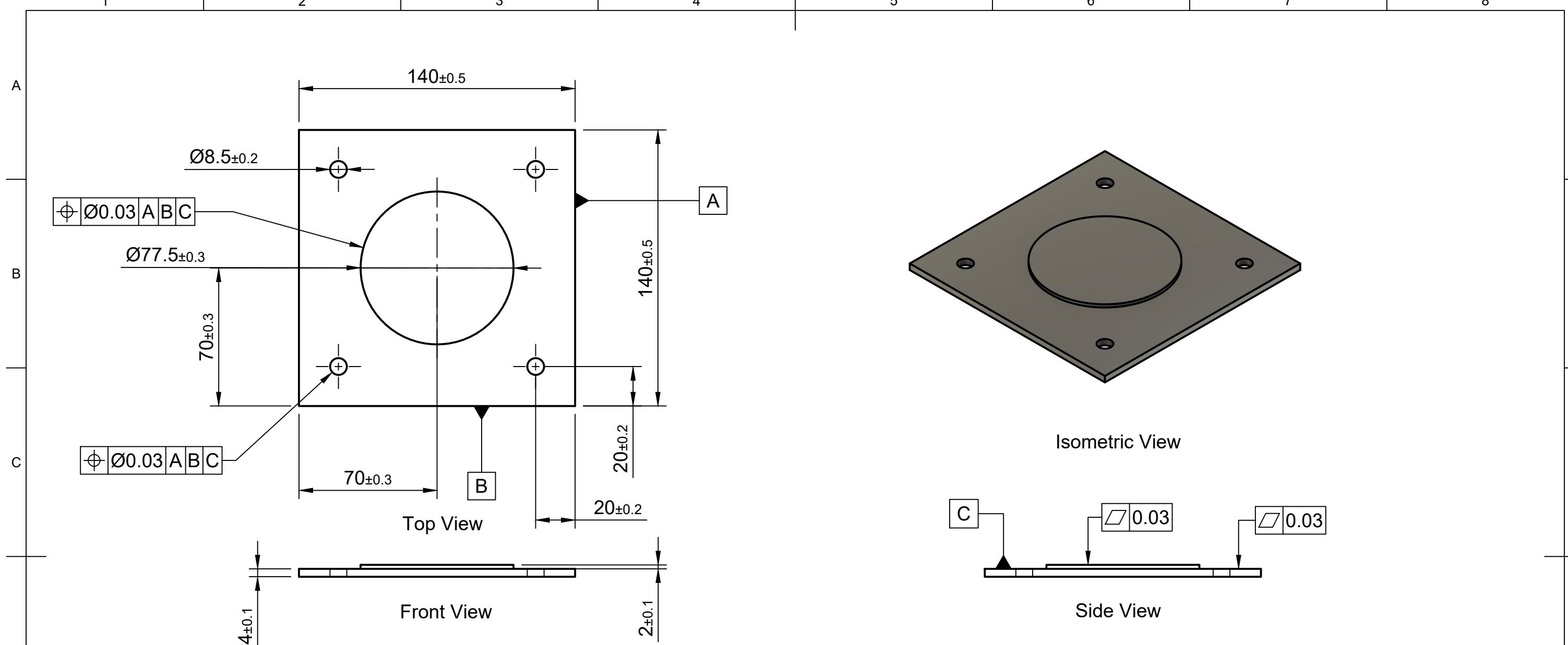


Third Angle Projection



1 2 3 4 5 6 7 8





SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM06</b>	<b>Top Cover</b>	<b>01</b>	<b>140 mm x 140 mm x 6 mm</b>	<b>Mild Steel</b>

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 0.761 Kg

**DEBURR AND BREAK SHARP EDGES**

**DO NOT SCALE DRAWING**

# AHMEDABAD UNIVERSITY

## SCHOOL OF ENGINEERING AND APPLIED SCIENCE

**IF IN DOUBT, ASK**

DRN | Jog Desai | 03-12-2023 | MEC405 | LEARNING FACTORY PROJECT

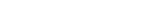
## Default Tolerance table as per IS:2102

CHD	Jog Desai	03-12-2023	TITLE: <b>Top Cover</b>	Part No: <b>SEM06</b>
APD	Jog Desai	03-12-2023		

## Welded Construction

Class

## Machined and Formed

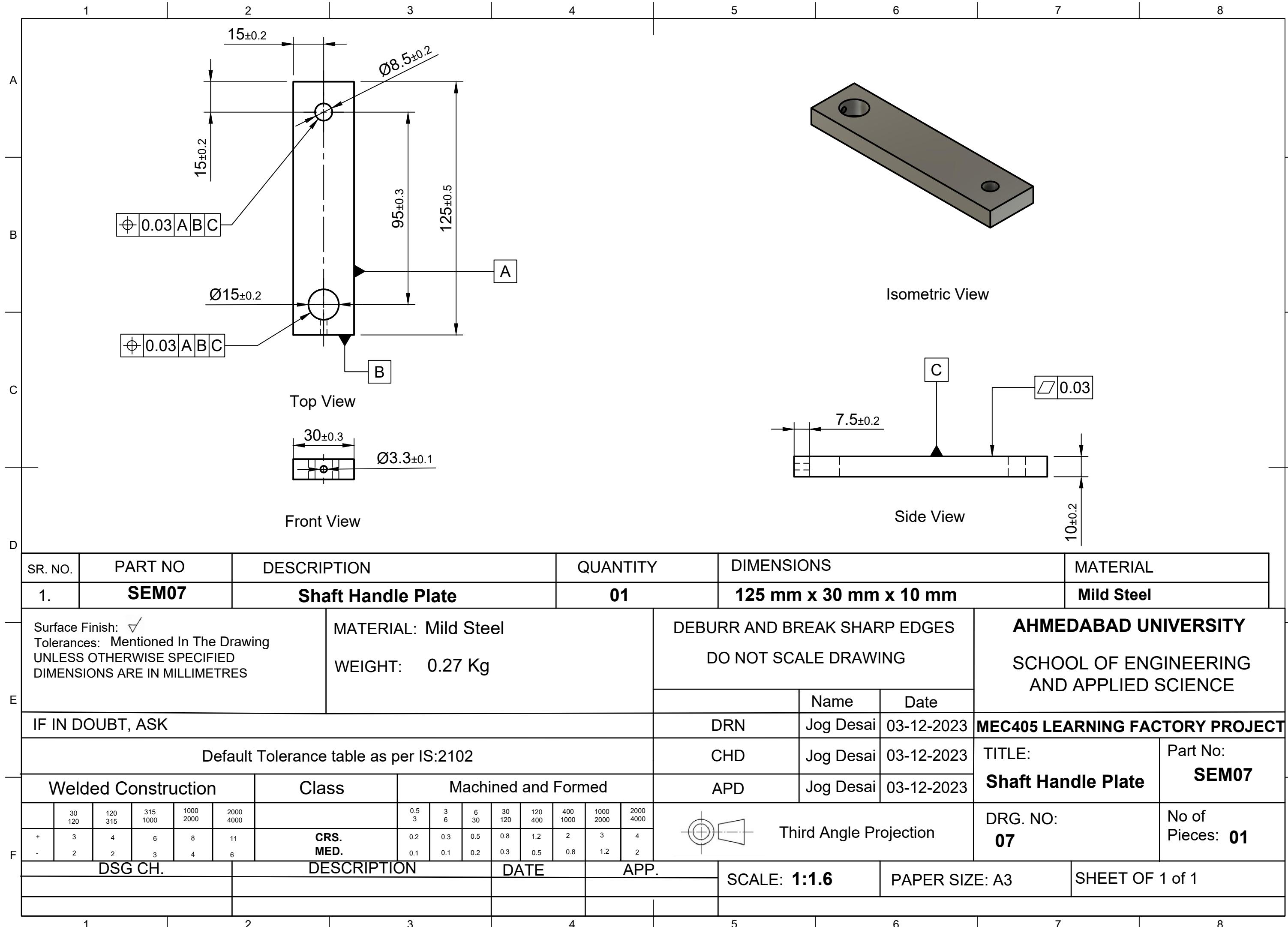
	30 120	120 315	315 1000	1000 2000	2000 4000		0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	2000 4000		Third Angle Projection	DRG. NO: <b>06</b>	No of Pieces: <b>01</b>
+	3	4	6	8	11	<b>CRS. MED.</b>	0.2	0.3	0.5	0.8	1.2	2	3	4				
-	2	2	3	4	6		0.1	0.1	0.2	0.3	0.5	0.8	1.2	2				

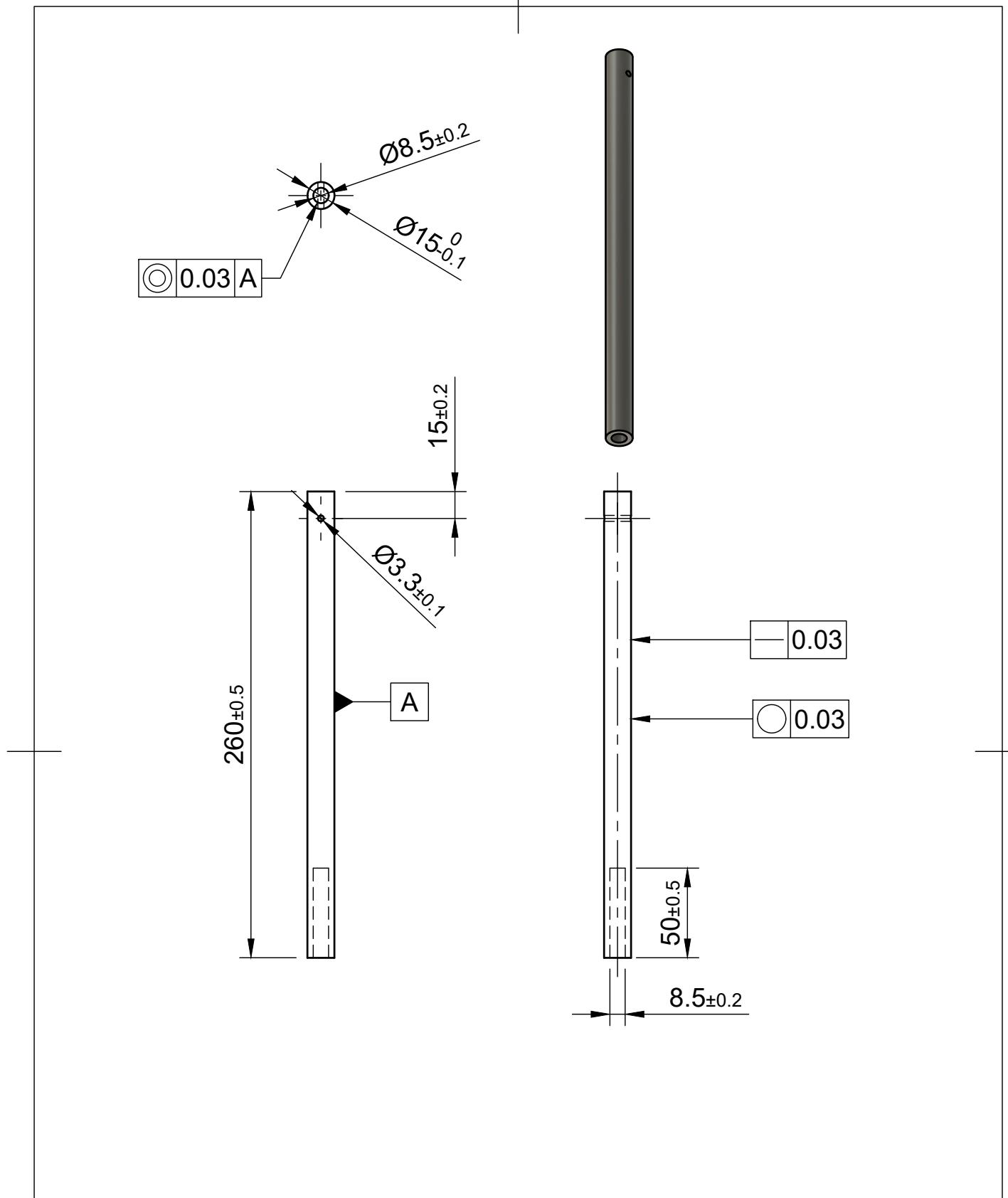
## Third Angle Projection

**DRG. NO:**  
**06**

No of  
Pieces: **01**

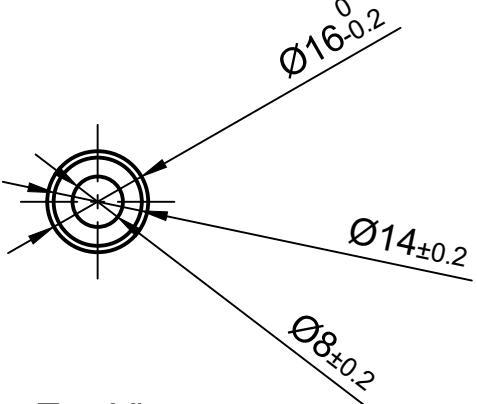
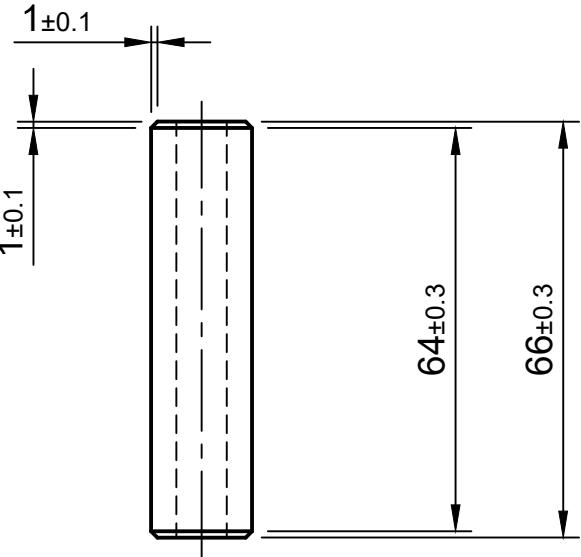
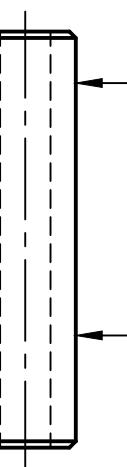
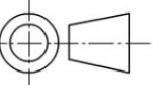
DSG CH.	DESCRIPTION	DATE	APP.	SCALE: 1:2	PAPER SIZE: A3	SHEET OF 1 of 1

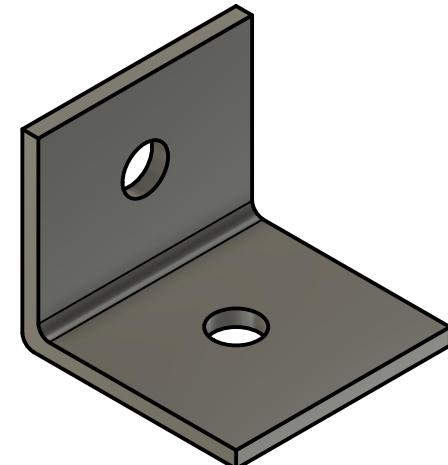
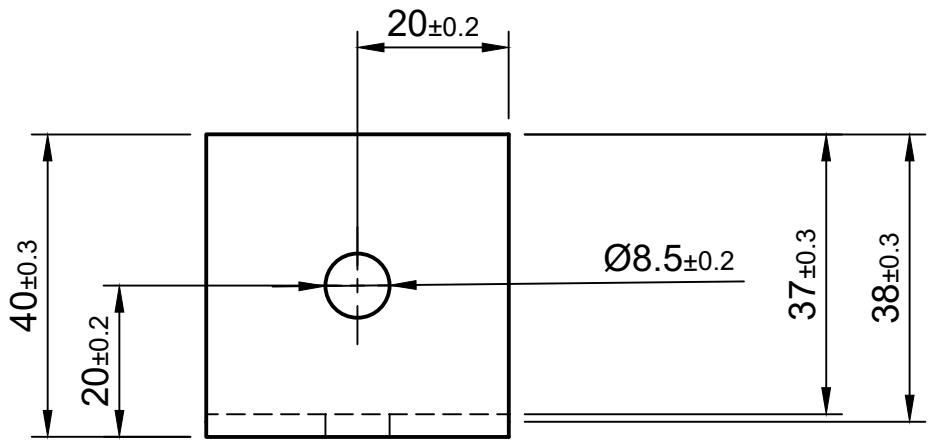




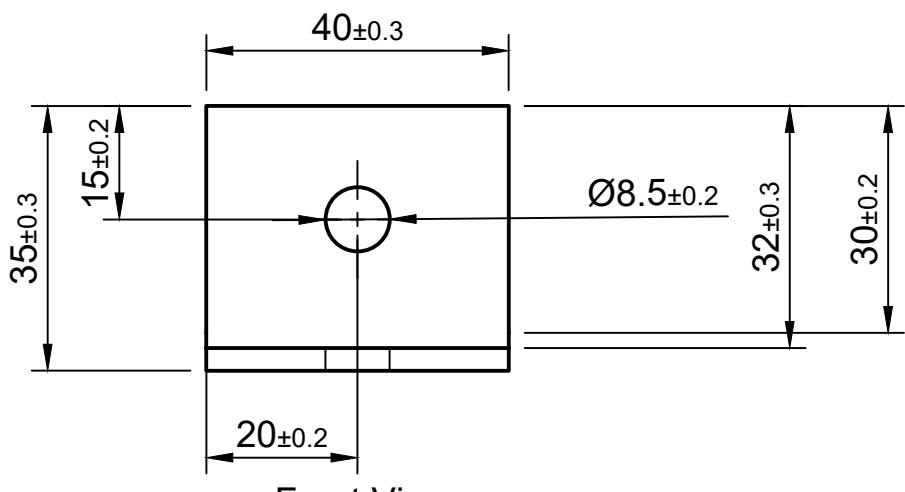
SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL		
1.	SEM08	Shaft	01	260 mm x 15 mm	Mild Steel		
Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES		MATERIAL: Mild Steel WEIGHT: 0.360 Kg	DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING		AHMEDABAD UNIVERSITY SCHOOL OF ENGINEERING AND APPLIED SCIENCE		
IF IN DOUBT, ASK			DRN	Jog Desai 03-12-2023	MEC405 LEARNING FACTORY PROJECT		
Default Tolerance table as per IS:2102			CHD	Jog Desai 03-12-2023	TITLE: <b>Shaft</b>		
Welded Construction		Class	Machined and Formed	APD	Part No: <b>SEM08</b>		
+ 3 - 2	420 315 1000 2000 2000	315 315 1000 2000 2000	0.5 3 6 30 120 400 400 1000 1000 2000 2000	0.2 0.3 0.5 0.8 1.2 2 3 4 1.2 2	Third Angle Projection	DRG. NO: <b>08</b>	No of Pieces: <b>01</b>
DSG CH.		DESCRIPTION	DATE	APP.	SCALE: 1:3	PAPER SIZE: A4	SHEET OF 1 of 1

1 2 3 4 5 6 7 8

A	 <p>Top View</p>								B	 <p>Isometric View</p>								C														
C	 <p>Front View</p>								D	 <p>Side View</p>								E														
D	<b>SR. NO.</b>		<b>PART NO</b>		<b>DESCRIPTION</b>				QUANTITY	<b>DIMENSIONS</b>				<b>MATERIAL</b>																		
E	1.		<b>SEM09</b>		<b>Piston Pin</b>				01	<b>66 mm x 16 mm x 4mm</b>				<b>Mild Steel</b>																		
F	Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES					MATERIAL: Mild Steel  WEIGHT: 0.080 Kg				DEBURR AND BREAK SHARP EDGES  DO NOT SCALE DRAWING				<b>AHMEDABAD UNIVERSITY</b>  <b>SCHOOL OF ENGINEERING</b> <b>AND APPLIED SCIENCE</b>																		
G	<b>IF IN DOUBT, ASK</b>												<b>MEC405 LEARNING FACTORY PROJECT</b>																			
H	Default Tolerance table as per IS:2102												DRN: Jog Desai   Date: 03-12-2023   Title: <b>Piston Pin</b>   Part No: <b>SEM09</b>																			
I	<b>Welded Construction</b>					<b>Class</b>			<b>Machined and Formed</b>			APD: Jog Desai   Date: 03-12-2023			DRG. NO: <b>09</b>   No of Pieces: <b>01</b>																	
J	<table border="1"> <tr> <td>30 120</td><td>120 315</td><td>315 1000</td><td>1000 2000</td><td>2000 4000</td> </tr> </table>					30 120	120 315	315 1000	1000 2000	2000 4000	<table border="1"> <tr> <td>0.5 3</td><td>3 6</td><td>6 30</td> </tr> </table>			0.5 3	3 6	6 30	<table border="1"> <tr> <td>30 120</td><td>120 400</td><td>400 1000</td> </tr> </table>			30 120	120 400	400 1000	<table border="1"> <tr> <td>1000 2000</td><td>2000 4000</td><td></td> </tr> </table>			1000 2000	2000 4000		 Third Angle Projection			
30 120	120 315	315 1000	1000 2000	2000 4000																												
0.5 3	3 6	6 30																														
30 120	120 400	400 1000																														
1000 2000	2000 4000																															
K	<table border="1"> <tr> <td>+ 3</td><td>4</td><td>6</td><td>8</td><td>11</td> </tr> </table>					+ 3	4	6	8	11	<table border="1"> <tr> <td>0.2 0.1</td><td>0.3 0.1</td><td>0.5 0.2</td> </tr> </table>			0.2 0.1	0.3 0.1	0.5 0.2	<table border="1"> <tr> <td>0.8 0.3</td><td>1.2 0.5</td><td>2 0.8</td> </tr> </table>			0.8 0.3	1.2 0.5	2 0.8	<table border="1"> <tr> <td>3 1.2</td><td>4 2</td><td></td> </tr> </table>			3 1.2	4 2		DSG CH.: <b>09</b>   DESCRIPTION: <b>SEM09</b>   DATE: <b>03-12-2023</b>   APP.: <b>Jog Desai</b>   SCALE: <b>1:1.2</b>   PAPER SIZE: <b>A3</b>   SHEET OF <b>1</b> of <b>1</b>			
+ 3	4	6	8	11																												
0.2 0.1	0.3 0.1	0.5 0.2																														
0.8 0.3	1.2 0.5	2 0.8																														
3 1.2	4 2																															
L	DSG CH.: <b>09</b>   DESCRIPTION: <b>SEM09</b>   DATE: <b>03-12-2023</b>   APP.: <b>Jog Desai</b>   SCALE: <b>1:1.2</b>   PAPER SIZE: <b>A3</b>   SHEET OF <b>1</b> of <b>1</b>					DSG CH.: <b>09</b>   DESCRIPTION: <b>SEM09</b>   DATE: <b>03-12-2023</b>   APP.: <b>Jog Desai</b>   SCALE: <b>1:1.2</b>   PAPER SIZE: <b>A3</b>   SHEET OF <b>1</b> of <b>1</b>			DSG CH.: <b>09</b>   DESCRIPTION: <b>SEM09</b>   DATE: <b>03-12-2023</b>   APP.: <b>Jog Desai</b>   SCALE: <b>1:1.2</b>   PAPER SIZE: <b>A3</b>   SHEET OF <b>1</b> of <b>1</b>			DSG CH.: <b>09</b>   DESCRIPTION: <b>SEM09</b>   DATE: <b>03-12-2023</b>   APP.: <b>Jog Desai</b>   SCALE: <b>1:1.2</b>   PAPER SIZE: <b>A3</b>   SHEET OF <b>1</b> of <b>1</b>																				

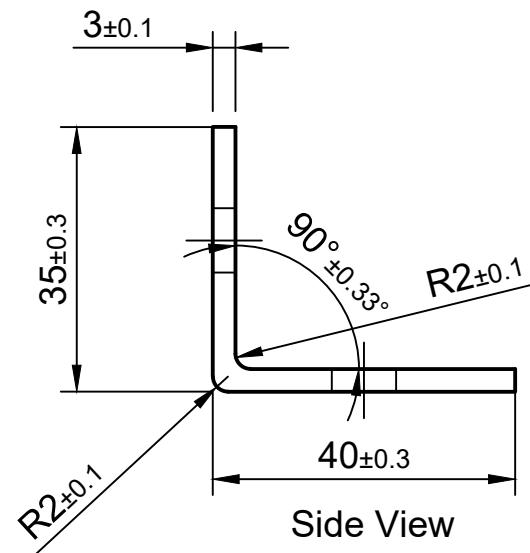


## Top View



## Front View

## Isometric View



## Side View

SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM10</b>	<b>Clamp - 3 - Small</b>	<b>04</b>	<b>35 mm x 40 mm x 3 mm</b>	<b>Mild Steel</b>

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 0.065 Kg

# DEBURR AND BREAK SHARP EDGES

## DO NOT SCALE DRAWING

**AHMEDABAD UNIVERSITY**  
**SCHOOL OF ENGINEERING  
AND APPLIED SCIENCE**

**IF IN DOUBT, ASK**

DRN Jog Desai 03-12-2023 MEC405 LEARNING FACTORY PROJECT

## **Default Tolerance table as per IS:2102**

# Welded Construction

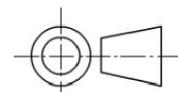
Class

## Machined and Formed

APD | Jog Desai | 03-12-2023

No of  
Pieces: **04**

	30 120	120 315	315 1000	1000 2000	2000 4000			0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	20 40
+	3	4	6	8	11	<b>CRS.</b>		0.2	0.3	0.5	0.8	1.2	2	3	4
-	2	2	3	4	6	<b>MED.</b>		0.1	0.1	0.2	0.3	0.5	0.8	1.2	2

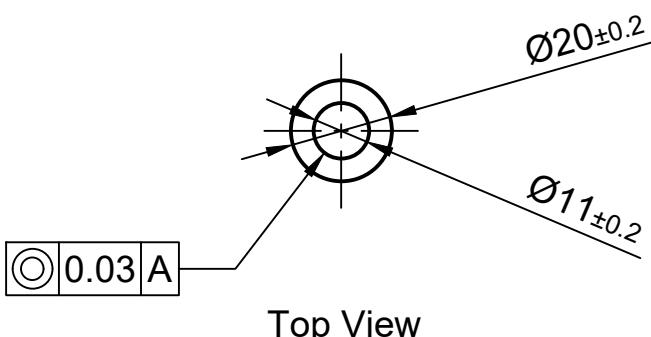
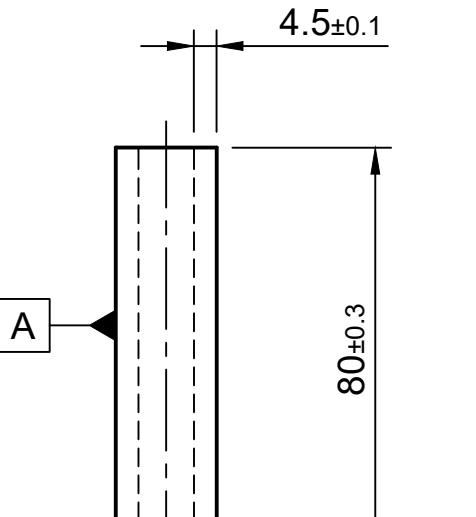
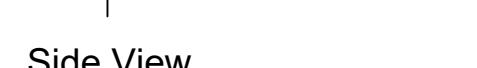


## Third Angle Projection

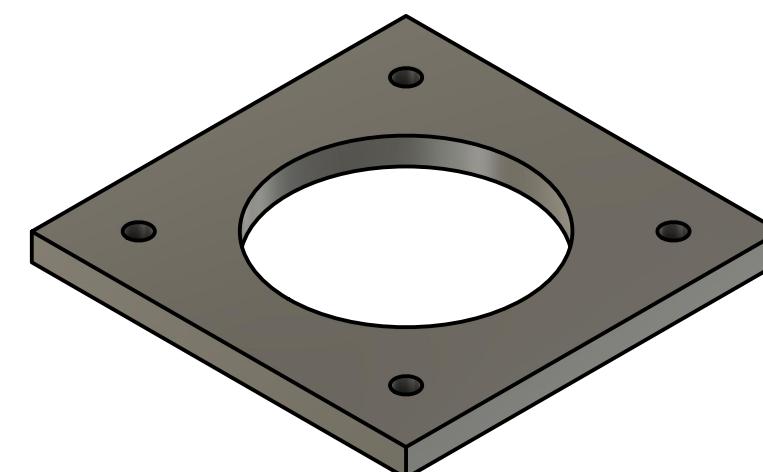
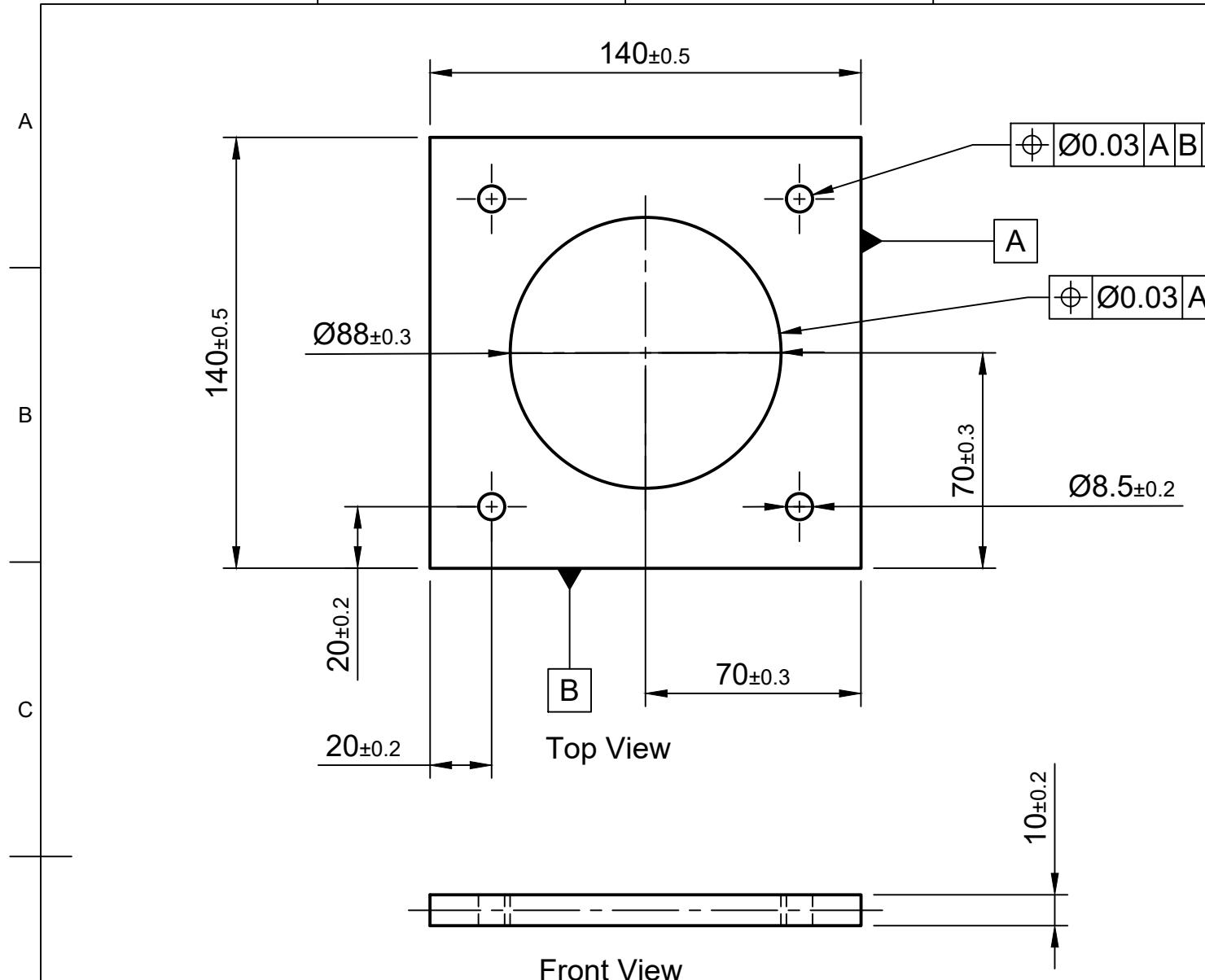
**DRG. NO:**  
**10**

DSG CH.	DESCRIPTION	DATE	APP.	SCALE: 1:1	PAPER SIZE: A3	SHEET OF 1 of 1
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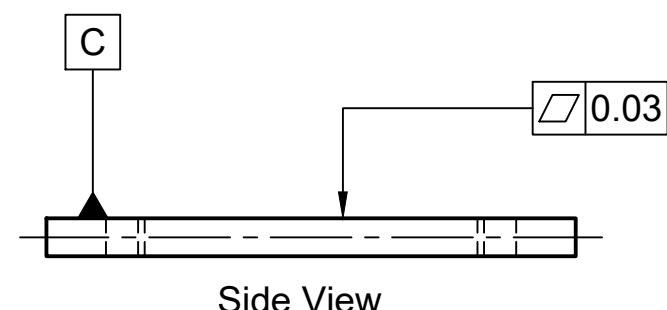
1 2 3 4 5 6 7 8

A	 <p>Top View</p>										A								
B	 <p>Isometric View</p>										B								
C	 <p>Front View</p>										C								
D	 <p>Side View</p>										D								
SR. NO.	PART NO	DESCRIPTION				QUANTITY	DIMENSIONS				MATERIAL								
1.	SEM11	Shaft Handle Holder				01	80 mm x 20 mm x 4.5 mm				Mild Steel								
Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES				MATERIAL: Mild Steel WEIGHT: 0.140 Kg				DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING											
								Name		Date	AHMEDABAD UNIVERSITY SCHOOL OF ENGINEERING AND APPLIED SCIENCE								
IF IN DOUBT, ASK										DRN	Jog Desai	03-12-2023	MEC405 LEARNING FACTORY PROJECT						
Default Tolerance table as per IS:2102										CHD	Jog Desai	03-12-2023	TITLE: Shaft Handle Holder						
Welded Construction					Class	Machined and Formed				APD	Jog Desai	03-12-2023	Part No: SEM11						
	30 120	120 315	315 1000	1000 2000	2000 4000		0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	2000 4000					
+ -	3 2	4 2	6 3	8 4	11 6	CRS. MED.	0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2	4 2					
DSG CH.					DESCRIPTION			DATE	APP.		SCALE: 2:3	PAPER SIZE: A3		SHEET OF 1 of 1					

1 2 3 4 5 6 7 8



Isometric View



SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM12</b>	<b>Cylinder Plate</b>	<b>02</b>	<b>140 mm x 140 mm x 10 mm</b>	<b>Mild Steel</b>

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 1.00 Kg

DEBURR AND BREAK SHARP EDGES  
DO NOT SCALE DRAWING

**AHMEDABAD UNIVERSITY**  
**SCHOOL OF ENGINEERING**  
**AND APPLIED SCIENCE**

IF IN DOUBT, ASK

DRN Jog Desai 03-12-2023 **MEC405 LEARNING FACTORY PROJECT**

Default Tolerance table as per IS:2102

CHD Jog Desai 03-12-2023 **TITLE:**

Welded Construction

Class

Machined and Formed

APD

Jog Desai 03-12-2023

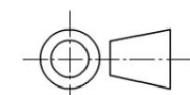
Part No:

**Cylinder Plate****SEM12**

	30 120	120 315	315 1000	1000 2000	2000 4000
+	3	4	6	8	11

CRS. MED.
0.2 0.1

0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	2000 4000
0.1	0.1	0.2	0.3	0.5	0.8	1.2	2

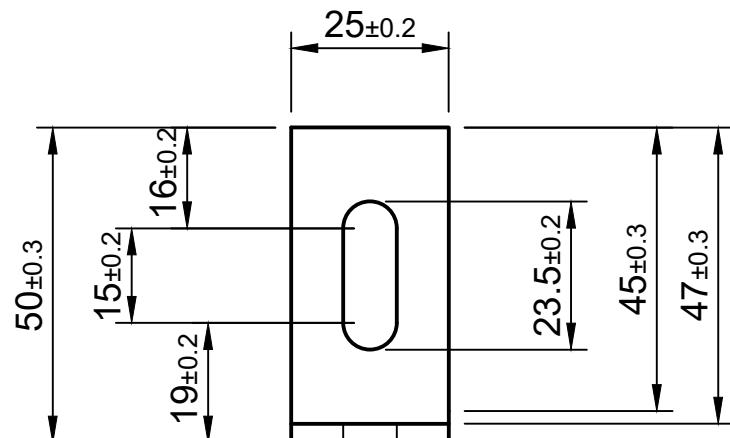
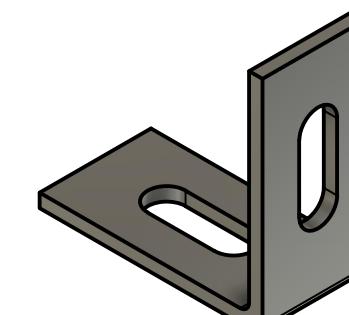
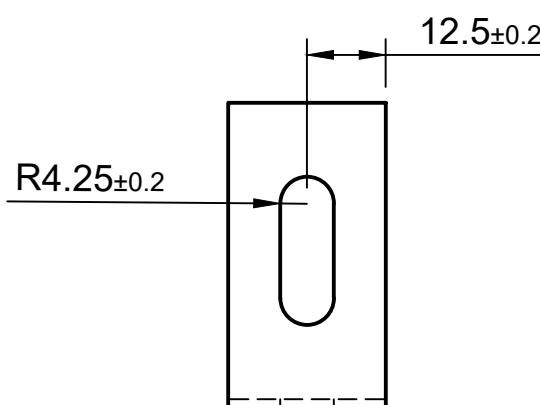
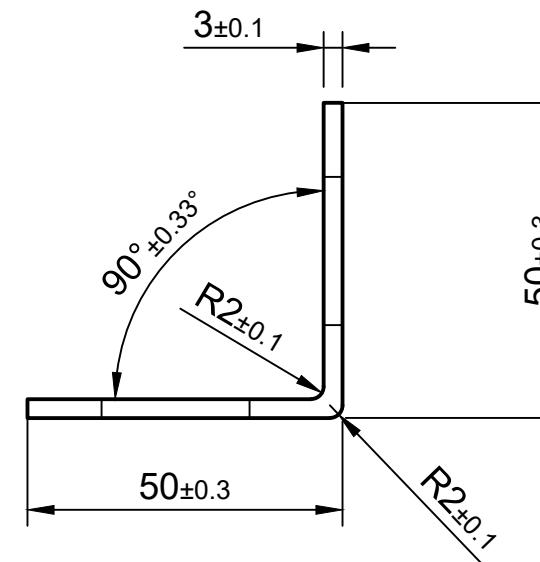
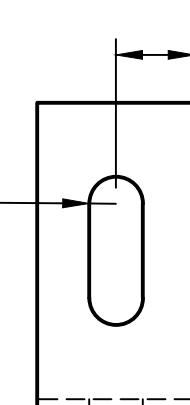


Third Angle Projection

DSG CH.	DESCRIPTION	DATE	APP.	SCALE: 1:2	PAPER SIZE: A3	SHEET OF 1 of 1

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

A			B			C		D
		<b>Top View</b> 		<b>Side View</b> 				
		<b>Front View</b> 						
E	SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS		MATERIAL	
1.		SEM13	Clamp - 1 - Medium	25	50 mm x 25 mm x 3 mm		Mild Steel	
F	Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES			MATERIAL: Mild Steel WEIGHT: 0.050 Kg	DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING		AHMEDABAD UNIVERSITY SCHOOL OF ENGINEERING AND APPLIED SCIENCE	
	IF IN DOUBT, ASK				Name	Date		
	Default Tolerance table as per IS:2102			DRN	Jog Desai	03-12-2023	MEC405 LEARNING FACTORY PROJECT	
	Welded Construction			CHD	Jog Desai	03-12-2023	TITLE: Clamp - 1 - Medium	
	Class			APD	Jog Desai	03-12-2023	Part No: SEM13	
	Machined and Formed							
	30 120	120 315	315 1000	1000 2000	2000 4000			
	0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	
	0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2	
	+	3	4	8	11	4	2	
	-	2	2	3	6	4	6	
	DSG CH.		DESCRIPTION	DATE	APP.	SCALE: 1:1.2	PAPER SIZE: A3	
							SHEET OF 1 of 1	

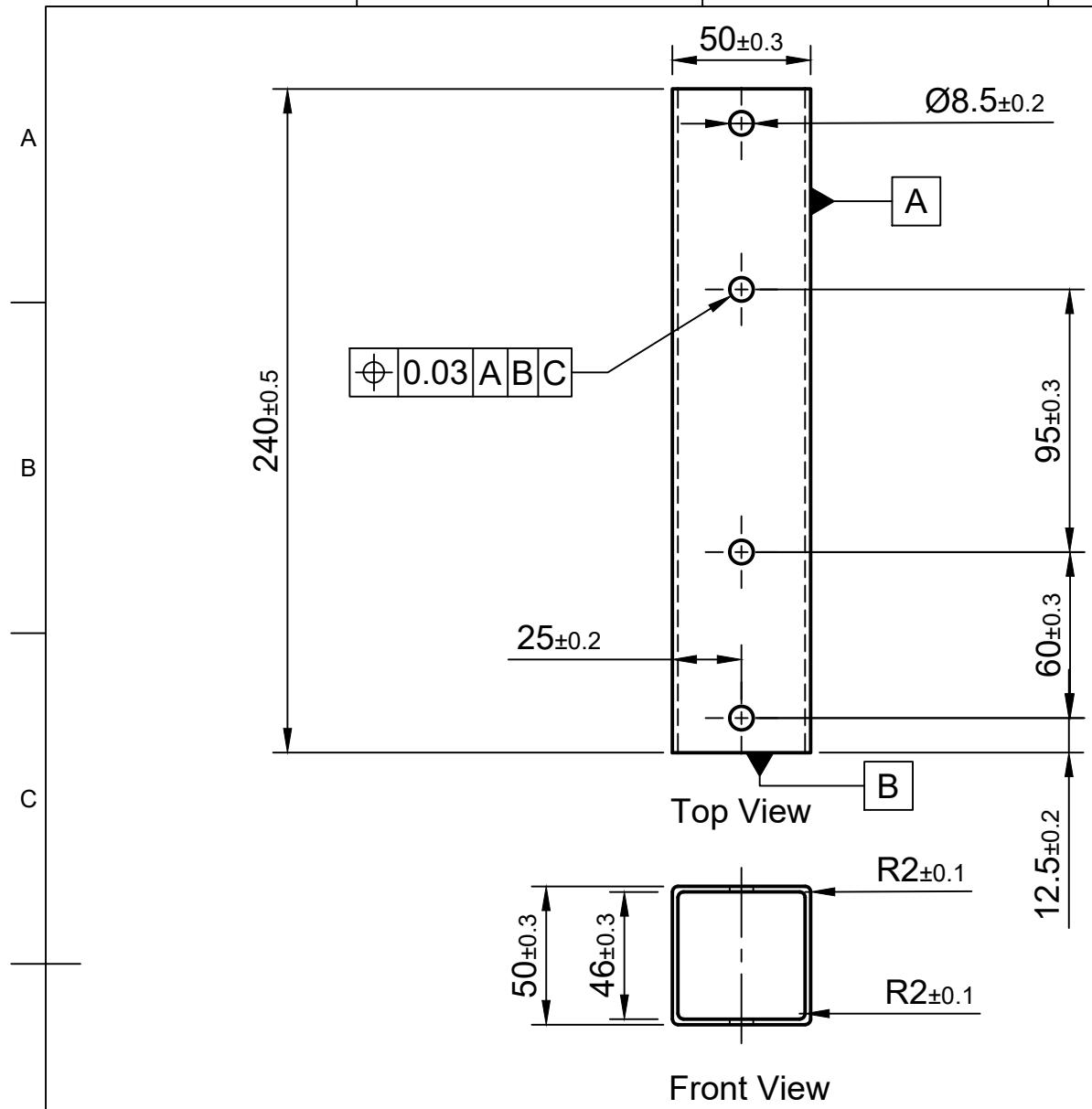


Third Angle Projection

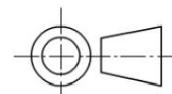
1 2 3 4 5 6 7 8

A	<p>Top View</p>				<p>Isometric View</p>				A																																															
B	<p>Front View</p>				<p>Side View</p>				B																																															
C	<p>Front View</p>				<p>Side View</p>				C																																															
D	<table border="1"> <thead> <tr> <th>SR. NO.</th><th>PART NO</th><th>DESCRIPTION</th><th>QUANTITY</th><th colspan="3">DIMENSIONS</th><th>MATERIAL</th></tr> </thead> <tbody> <tr> <td>1.</td><td>SEM14</td><td>Clamp - 2 - Big</td><td>06</td><td colspan="3">85 mm x 25 mm x 3 mm</td><td>Mild Steel</td></tr> </tbody> </table>				SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS			MATERIAL	1.	SEM14	Clamp - 2 - Big	06	85 mm x 25 mm x 3 mm			Mild Steel					D																															
SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS			MATERIAL																																																	
1.	SEM14	Clamp - 2 - Big	06	85 mm x 25 mm x 3 mm			Mild Steel																																																	
E					<p>MATERIAL: Mild Steel WEIGHT: 0.080 Kg</p> <p>DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING</p>				<b>AHMEDABAD UNIVERSITY</b> <b>SCHOOL OF ENGINEERING</b> <b>AND APPLIED SCIENCE</b>																																															
F	<p>IF IN DOUBT, ASK</p> <p>Default Tolerance table as per IS:2102</p> <p>Welded Construction</p>				<p>DRN</p>		Jog Desai	03-12-2023	<b>MEC405 LEARNING FACTORY PROJECT</b>																																															
	<p>Class</p> <p>Machined and Formed</p>				<p>CHD</p>		Jog Desai	03-12-2023	<p>TITLE:</p> <p><b>Clamp - 2 - Big</b></p>																																															
	<p>APD</p>				<p>APD</p>		Jog Desai	03-12-2023	<p>Part No:</p> <p><b>SEM14</b></p>																																															
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120	315		315		1000		2000		4000		3	6	30	30	120	120	400	400	1000	1000	2000	2000																																		
	<p>DSG CH.</p>				<p>DESCRIPTION</p>				<p>No of Pieces:</p> <p><b>06</b></p>																																															
	<p>DATE</p>				<p>APP.</p>				<p>PAPER SIZE: A3</p>																																															
	<p>SCALE: 1:2</p>				<p>SHEET OF 1 of 1</p>																																																			

1 2 3 4 5 6 7 8



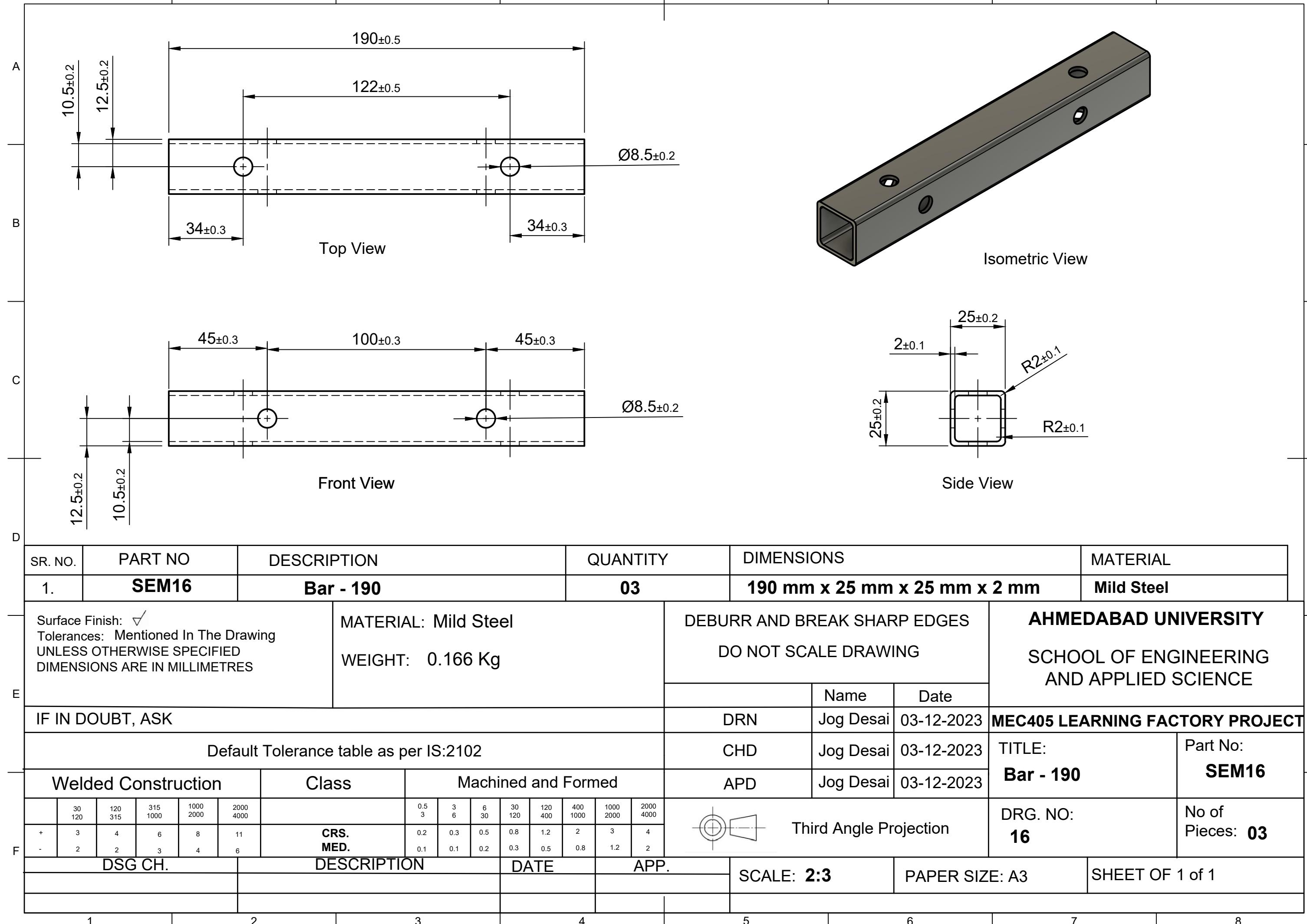
SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS			MATERIAL
1.	<b>SEM15</b>	<b>Bearing Stand</b>	02	<b>240 mm x 50 mm x 50 mm x 2 mm</b>			<b>Mild Steel</b>
Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES			MATERIAL: Mild Steel WEIGHT: 0.70 Kg			DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING	
						Name	Date
IF IN DOUBT, ASK				DRN	Jog Desai	03-12-2023	<b>MEC405 LEARNING FACTORY PROJECT</b>
Default Tolerance table as per IS:2102				CHD	Jog Desai	03-12-2023	TITLE: <b>Bearing Stand</b>
Welded Construction			Class	Machined and Formed			Part No: <b>SEM15</b>
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	0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000
	0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2
	+	3	4	8	11		
	-	2	2	3	4		
DSG CH.			DESCRIPTION	DATE	APP.	SCALE: 2:5	PAPER SIZE: A3
							SHEET OF 1 of 1



Third Angle Projection

1 2 3 4 5 6 7 8

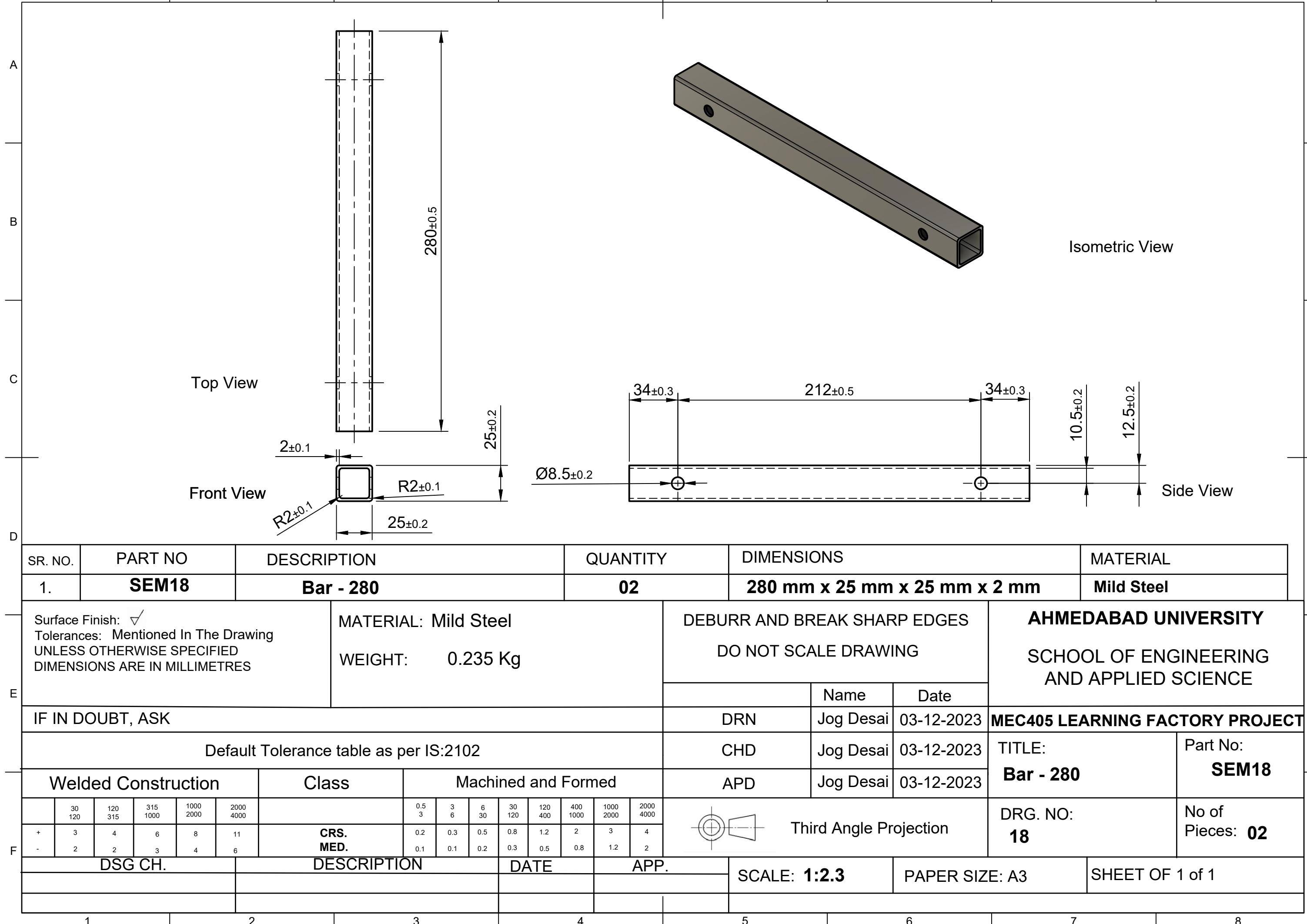
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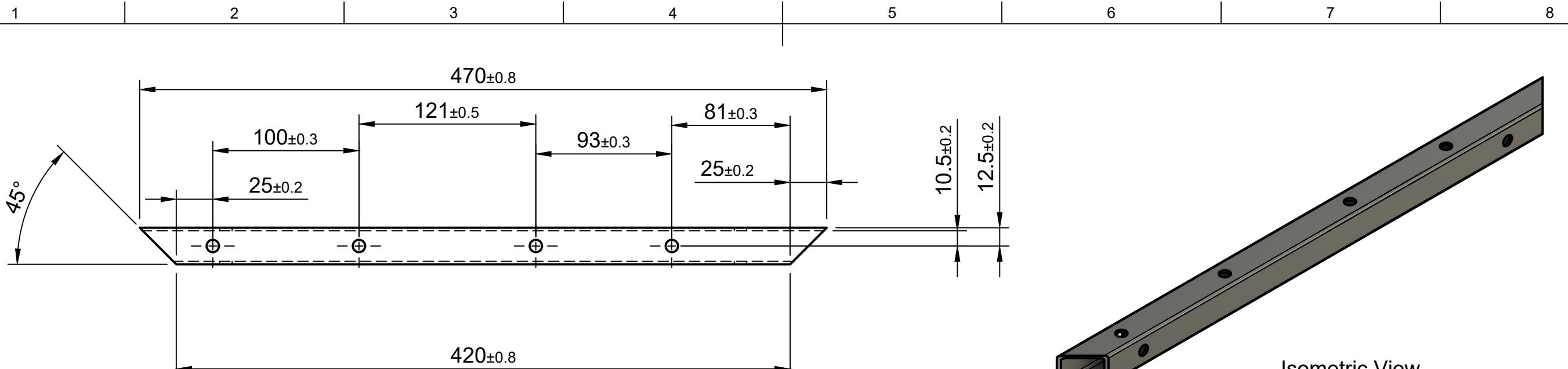


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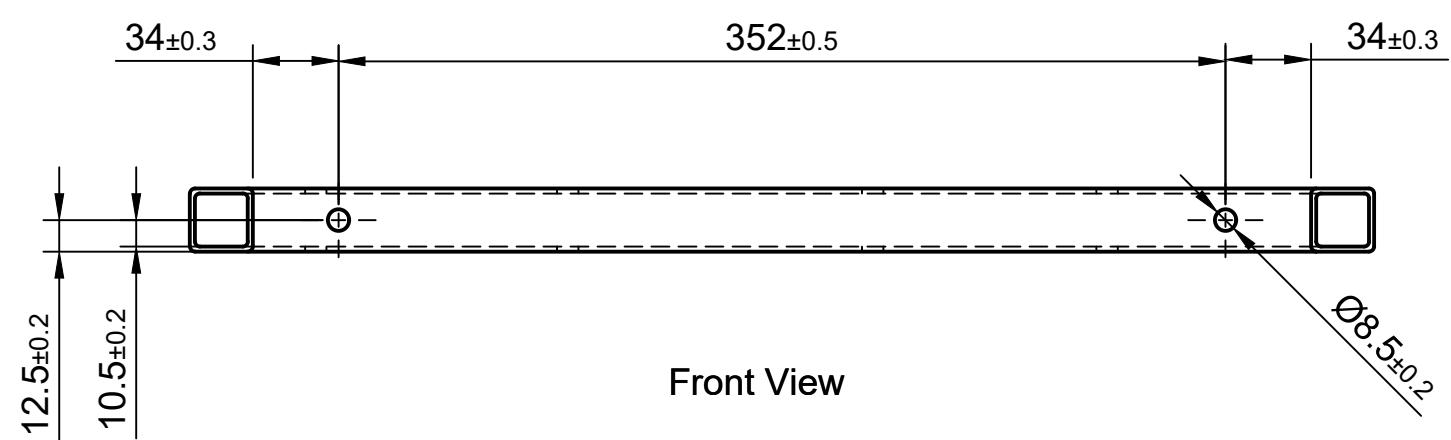
A	<p>Top View</p>								A																																																			
B	<p>Isometric View</p>								B																																																			
C	<p>Front View</p>								C																																																			
D	<p>Side View</p>								D																																																			
SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS				MATERIAL																																																				
1.	SEM17	Bar - 240	03	240 mm x 25 mm x 25 mm x 2 mm				Mild Steel																																																				
Surface Finish: ✓ Tolerances: Mentioned In The Drawing UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES			MATERIAL: Mild Steel WEIGHT: 0.190 Kg			DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING			AHMEDABAD UNIVERSITY SCHOOL OF ENGINEERING AND APPLIED SCIENCE																																																			
IF IN DOUBT, ASK									MEC405 LEARNING FACTORY PROJECT																																																			
Default Tolerance table as per IS:2102						DRN: Jog Desai   Date: 03-12-2023			TITLE: Bar - 240   Part No: SEM17																																																			
Welded Construction			Class: Machined and Formed			CHD: Jog Desai   Date: 03-12-2023			APD: Jog Desai   Date: 03-12-2023																																																			
<table border="1"> <tr> <td>30</td><td>120</td><td>315</td><td>315</td><td>1000</td><td>2000</td><td>2000</td> <td>0.5</td><td>3</td><td>6</td><td>30</td> <td>30</td><td>120</td><td>400</td><td>1000</td><td>1000</td><td>2000</td> </tr> <tr> <td>120</td><td>315</td><td></td><td></td><td>1000</td><td>2000</td><td></td> <td>3</td><td>6</td><td>30</td><td></td><td>120</td><td>400</td><td></td><td>1000</td><td>2000</td><td>4000</td> </tr> </table>			30	120	315	315	1000	2000	2000	0.5	3	6	30	30	120	400	1000	1000	2000	120	315			1000	2000		3	6	30		120	400		1000	2000	4000	<table border="1"> <tr> <td>0.2</td><td>0.3</td><td>0.5</td><td>0.8</td><td>1.2</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>0.1</td><td>0.1</td><td>0.2</td><td>0.3</td><td>0.5</td><td>0.8</td><td>1.2</td><td>2</td> </tr> </table>			0.2	0.3	0.5	0.8	1.2	2	3	4	0.1	0.1	0.2	0.3	0.5	0.8	1.2	2	Third Angle Projection			DRG. NO: 17   No of Pieces: 03	
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0.2	0.3	0.5	0.8	1.2	2	3	4																																																					
0.1	0.1	0.2	0.3	0.5	0.8	1.2	2																																																					
DSG CH.			DESCRIPTION			DATE			APP.																																																			
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1 2 3 4 5 6 7 8

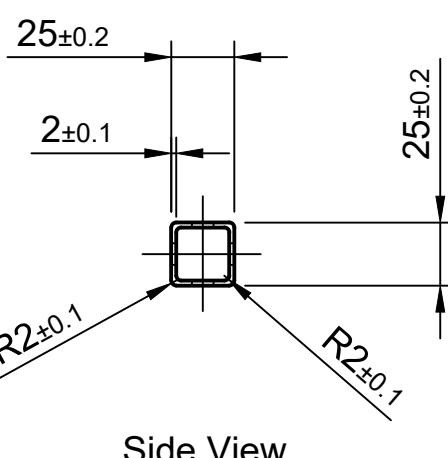
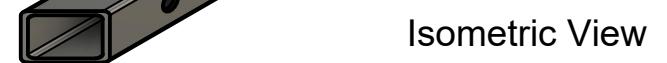




Top View



Front View



Side View

SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	SEM19	Bar - 470	02	470 mm x 25 mm x 25 mm x 2 mm	Mild Steel

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 0.350 Kg

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DRN Jog Desai 03-12-2023 MEC405 LEARNING FACTORY PROJECT

Default Tolerance table as per IS:2102

CHD Jog Desai 03-12-2023 TITLE: Bar - 470 Part No: SEM19

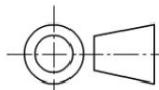
Welded Construction

Class

Machined and Formed

APD

Jog Desai 03-12-2023



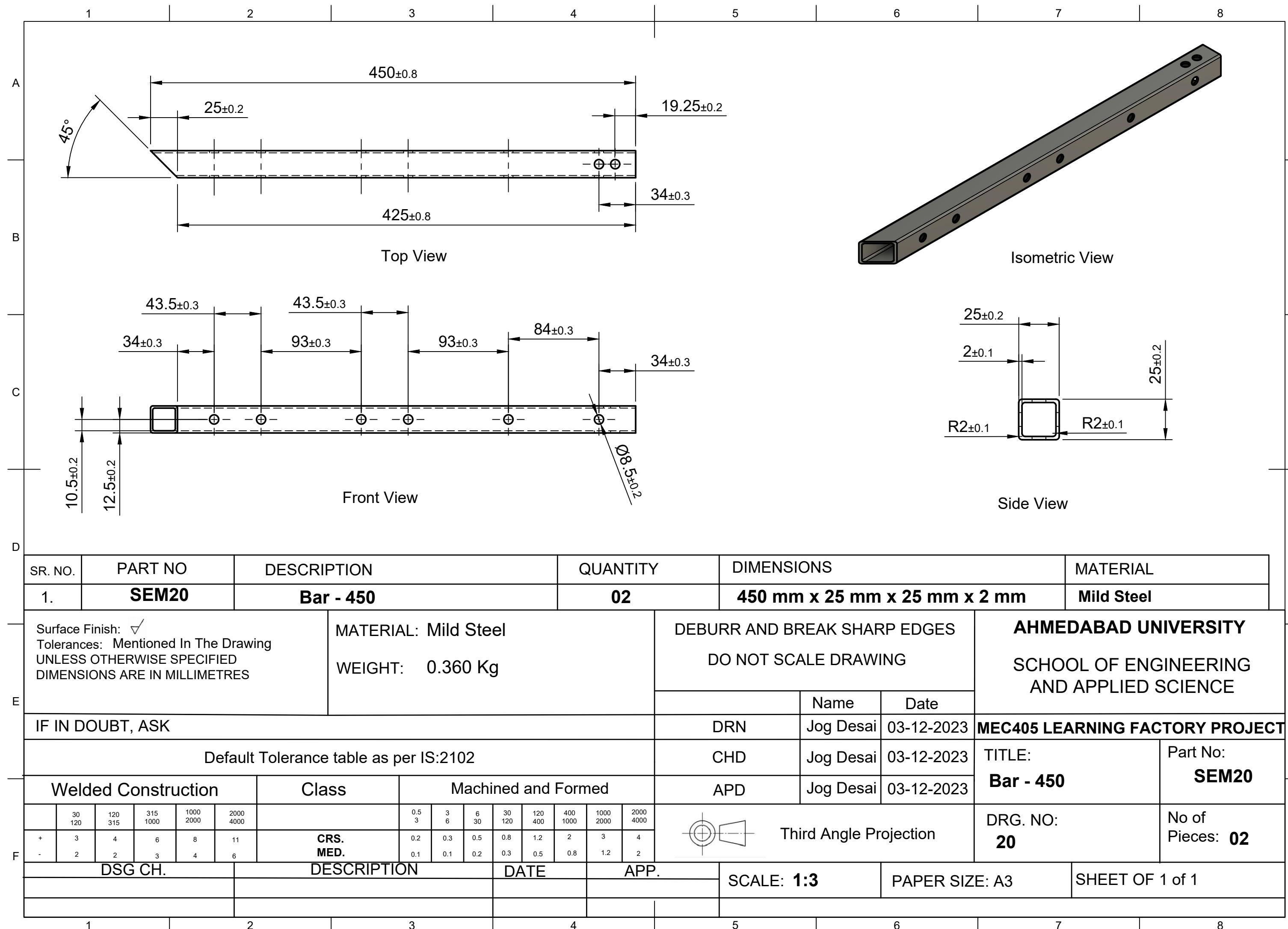
Third Angle Projection

DRG. NO:  
19

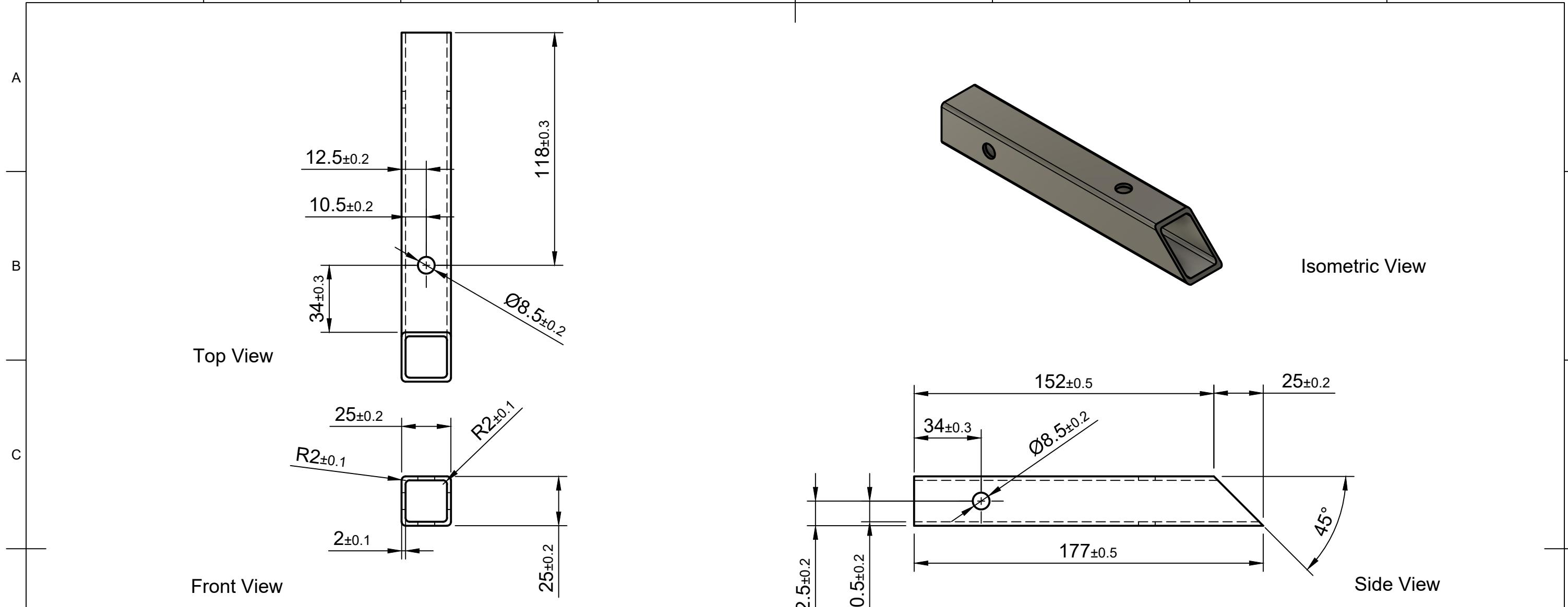
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Pieces: 02

DSG CH.						DESCRIPTION			DATE			APP.			SCALE: 1:3	PAPER SIZE: A3	SHEET OF 1 of 1
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+ 3 - 2	4 2	6 3	8 4	11 6		CRS. MED.	0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2	4 2			

1 2 3 4 5 6 7 8



1 2 3 4 5 6 7 8



SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM21</b>	<b>Bar - 177</b>	01	<b>177 mm x 25 mm x 25 mm x 2 mm</b>	<b>Mild Steel</b>

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 0.155 Kg

DEBURR AND BREAK SHARP EDGES  
DO NOT SCALE DRAWING

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IF IN DOUBT, ASK

DRN Jog Desai 03-12-2023 **MEC405 LEARNING FACTORY PROJECT**

Default Tolerance table as per IS:2102

CHD Jog Desai 03-12-2023 **TITLE:**  
**Bar - 177** **Part No:**  
**SEM21**

Welded Construction

Class

Machined and Formed

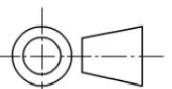
APD

Jog Desai 03-12-2023

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+	3	4	6	8	11		0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2	4 2

CRS. MED.
0.2 0.1

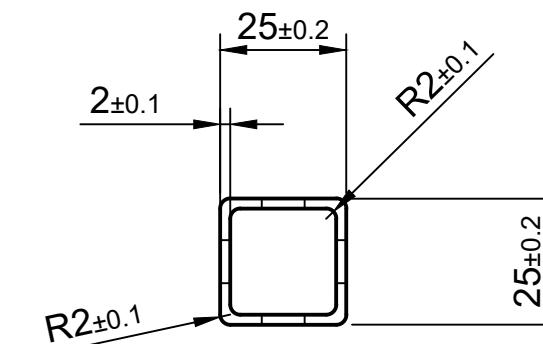
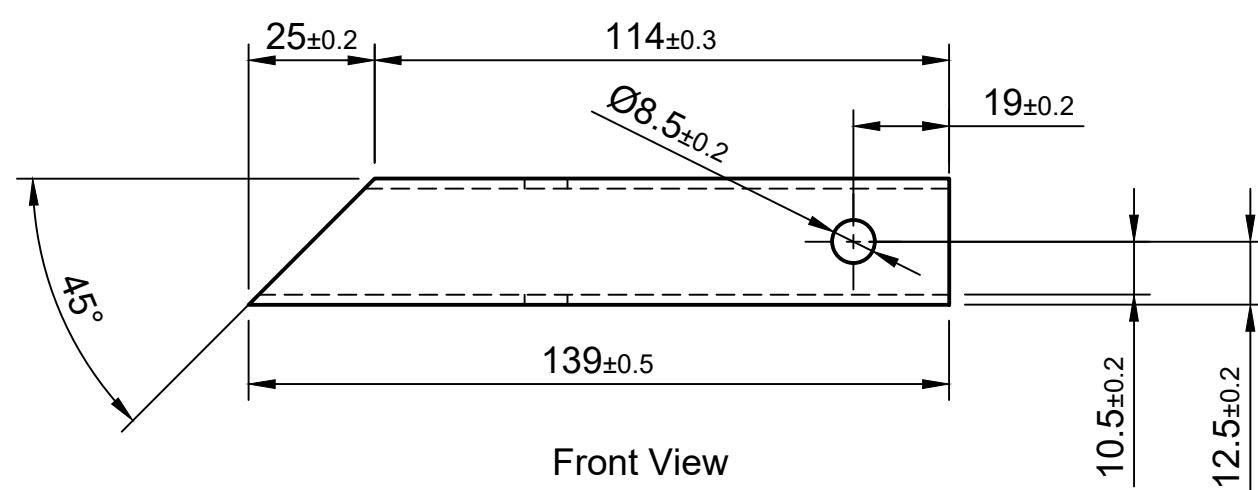
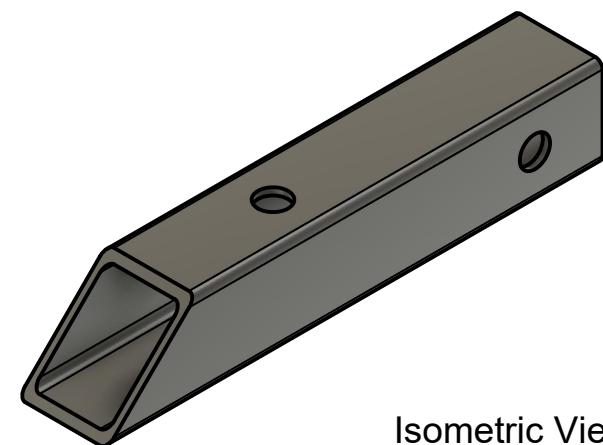
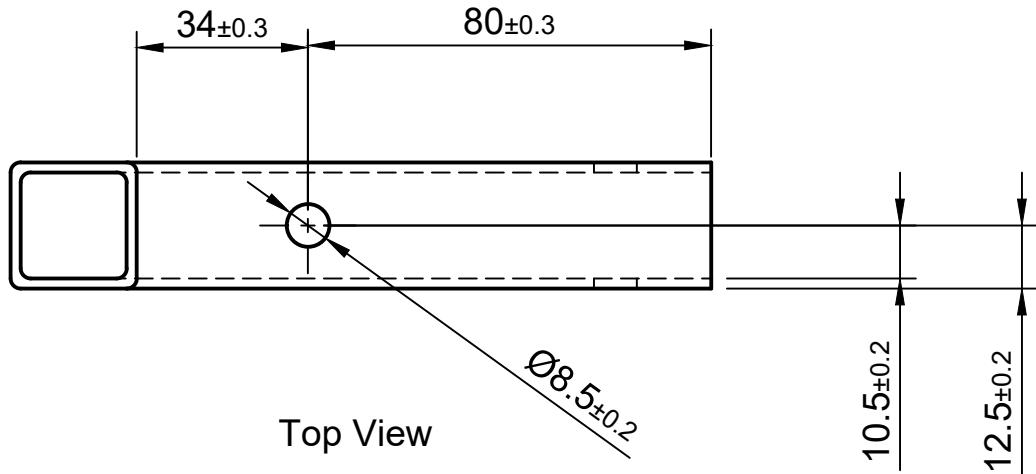
0.5 3	3 6	6 30	30 120	120 400	400 1000	1000 2000	2000 4000
0.2 0.1	0.3 0.1	0.5 0.2	0.8 0.3	1.2 0.5	2 0.8	3 1.2	4 2



Third Angle Projection

DSG CH.	DESCRIPTION	DATE	APP.	SCALE: 1:2	PAPER SIZE: A3	SHEET OF 1 of 1

1 2 3 4 5 6 7 8



SR. NO.	PART NO	DESCRIPTION	QUANTITY	DIMENSIONS	MATERIAL
1.	<b>SEM22</b>	<b>Bar - 139</b>	<b>01</b>	<b>139 mm x 25 mm x 25 mm x 2 mm</b>	<b>Mild Steel</b>

Surface Finish: ✓  
Tolerances: Mentioned In The Drawing  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN MILLIMETRES

MATERIAL: Mild Steel  
WEIGHT: 0.125 Kg

**DEBURR AND BREAK SHARP EDGES**

**DO NOT SCALE DRAWING**

**AHMEDABAD UNIVERSITY**  
**SCHOOL OF ENGINEERING  
AND APPLIED SCIENCE**

**IF IN DOUBT, ASK**

DRN Jog Desai 03-12-2023 MEC405 LEARNING FACTORY PROJECT

## **Default Tolerance table as per IS:2102**

## Welded Construction

Class

## Machined and Formed

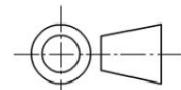
APD

Jog Desai | 03-12-2023

RG. NO:  
22

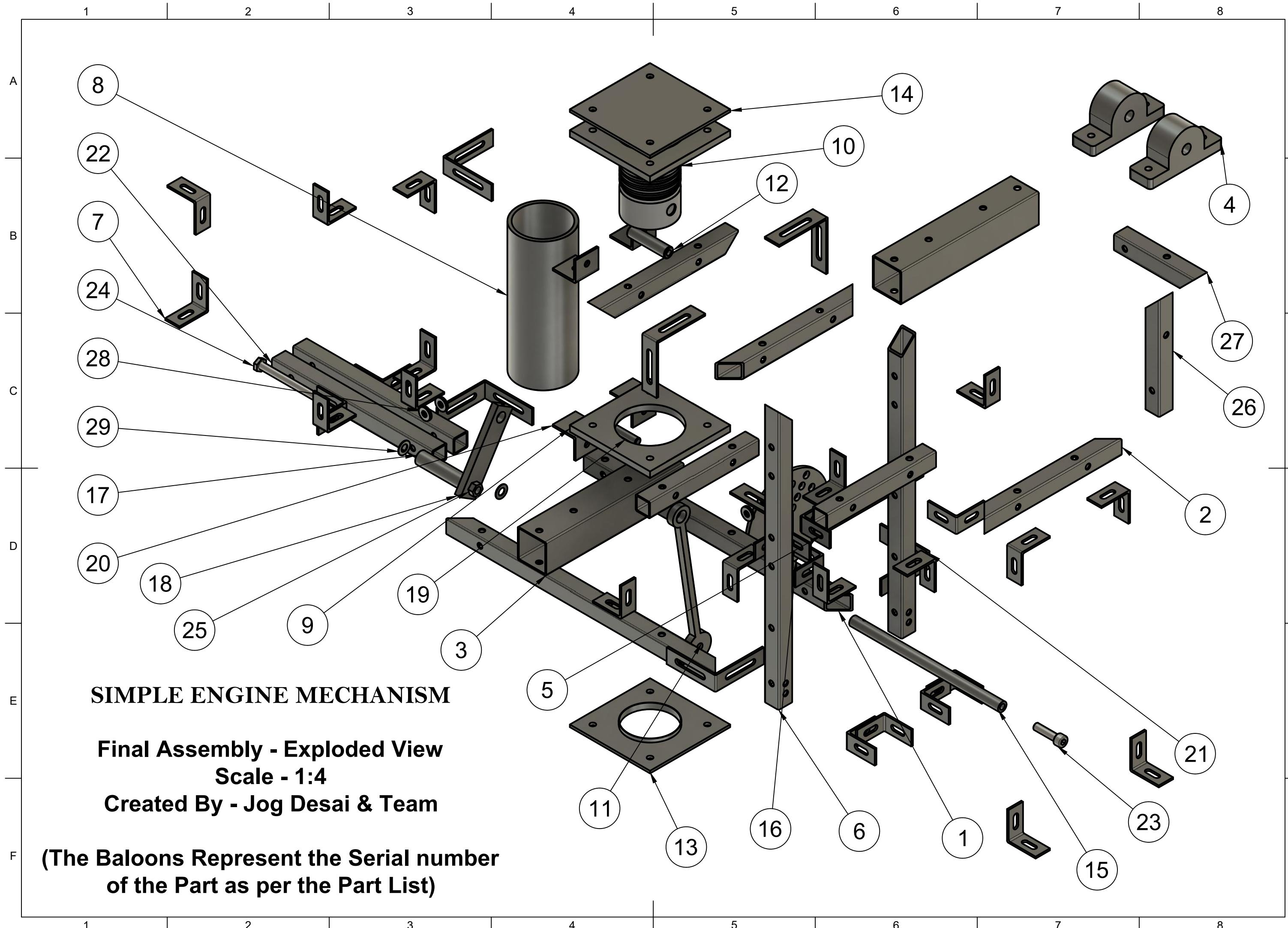
No of  
Pieces: **01**

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+	3	4	6	8	11	<b>CRS. MED.</b>	0.2	0.3	0.5	0.8	1.2	2	3	4
-	2	2	3	4	6		0.1	0.1	0.2	0.3	0.5	0.8	1.2	2



## Third Angle Projection

DSG CH.	DESCRIPTION	DATE	APP.	SCALE: 2:3	PAPER SIZE: A3	SHEET OF 1 of 1
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A

## Parts List

Item	Qty	Part Name	Part Number	Material	Mass
1	1	Bar - 470	SEM19	Steel	632.067 g
2	3	Bar - 240	SEM17	Steel	303.419 g
3	2	Bearing Stand	SEM15	Steel	718.111 g
4	2	Bearing	SEM23	Steel	1231.069 g
5	3	Bar - 190	SEM16	Steel	267.309 g
6	2	Bar - 450	SEM20	Steel	617.671 g
7	27	Clamp - 1 - Medium	SEM13	Steel	48.431 g
8	1	Cylinder Pipe	SEM01	Steel	2410.623 g
9	2	Cylinder Plate	SEM12	Steel	1043.335 g
10	1	Piston	SEM04	Steel	1534.751 g
11	1	Piston Rod	SEM03	Steel	257.227 g
12	1	Piston Pin	SEM09	Steel	77.749 g
13	1	Bottom Cover	SEM05	Steel	474.385 g
14	1	Top Cover	SEM06	Steel	682.374 g
15	1	Shaft	SEM08	Steel	337.399 g
16	1	Crank Disc	SEM02	Steel	562.734 g
17	1	Shaft handle holder	SEM11	Steel	137.611 g
18	1	Shaft handle plate	SEM07	Steel	275.542 g
19	1	Pin	SEM24	Steel	28.747 g
20	4	Clamp - 3 - Small	SEM10	Steel	65.151 g
21	7	Clamp - 2 - Big	SEM14	Steel	78.044 g
22	2	Bar - 280	SEM18	Steel	400.868 g
23	1	Allen bolt - M10	SEM25	Steel	37.461 g
24	1	Hex bolt - M10	SEM26	Steel	74.515 g
25	1	M10 - nut	SEM27	Steel	8.991 g
26	1	Bar - 177	SEM21	Steel	234.04 g
27	1	Bar - 139	SEM22	Steel	179.153 g
28	8	M8 - Washer	SEM28	Steel	3.229 g
29	2	M10- Washer	SEM29	Steel	1.786 g

A

B

C

D

E

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