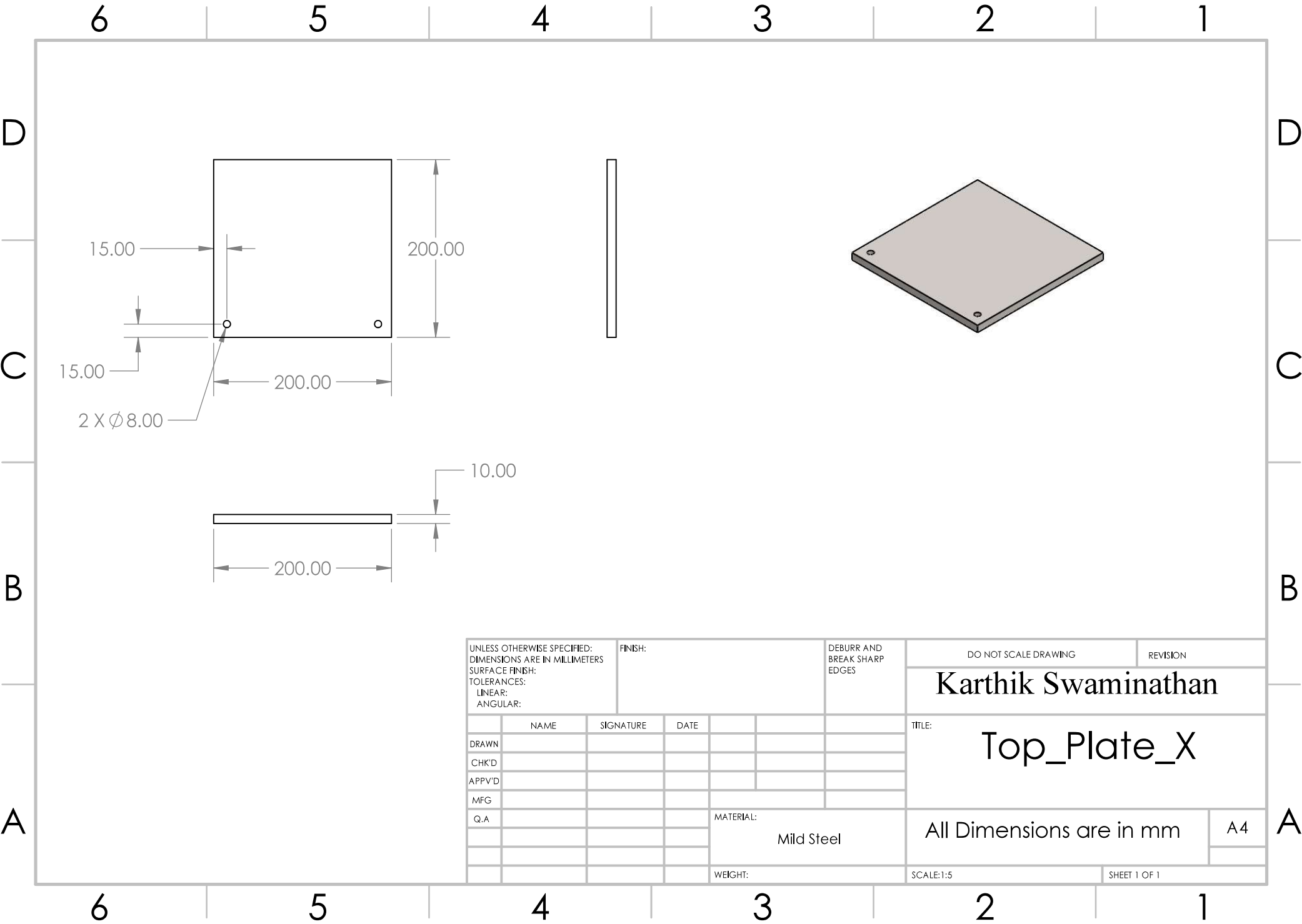
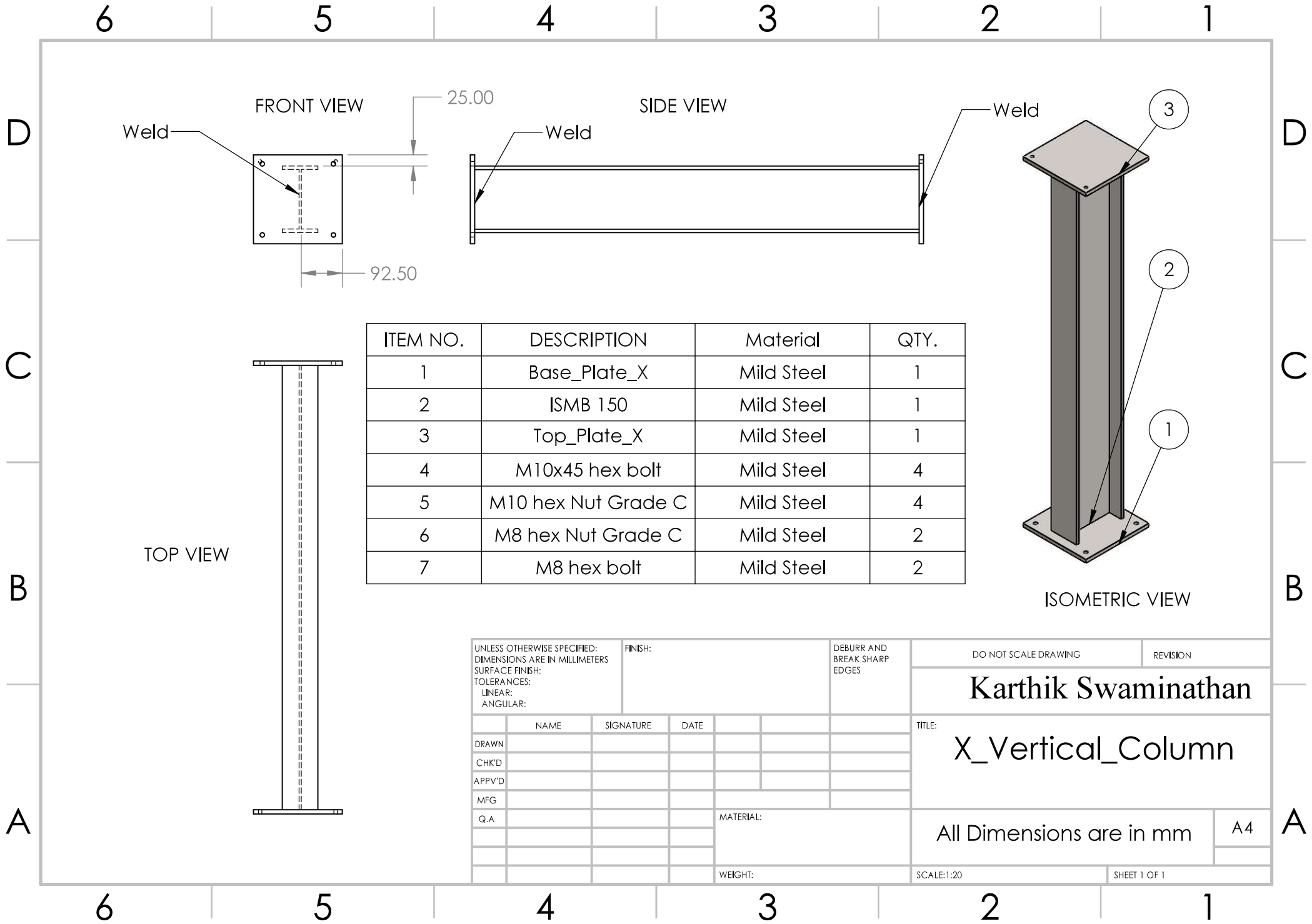
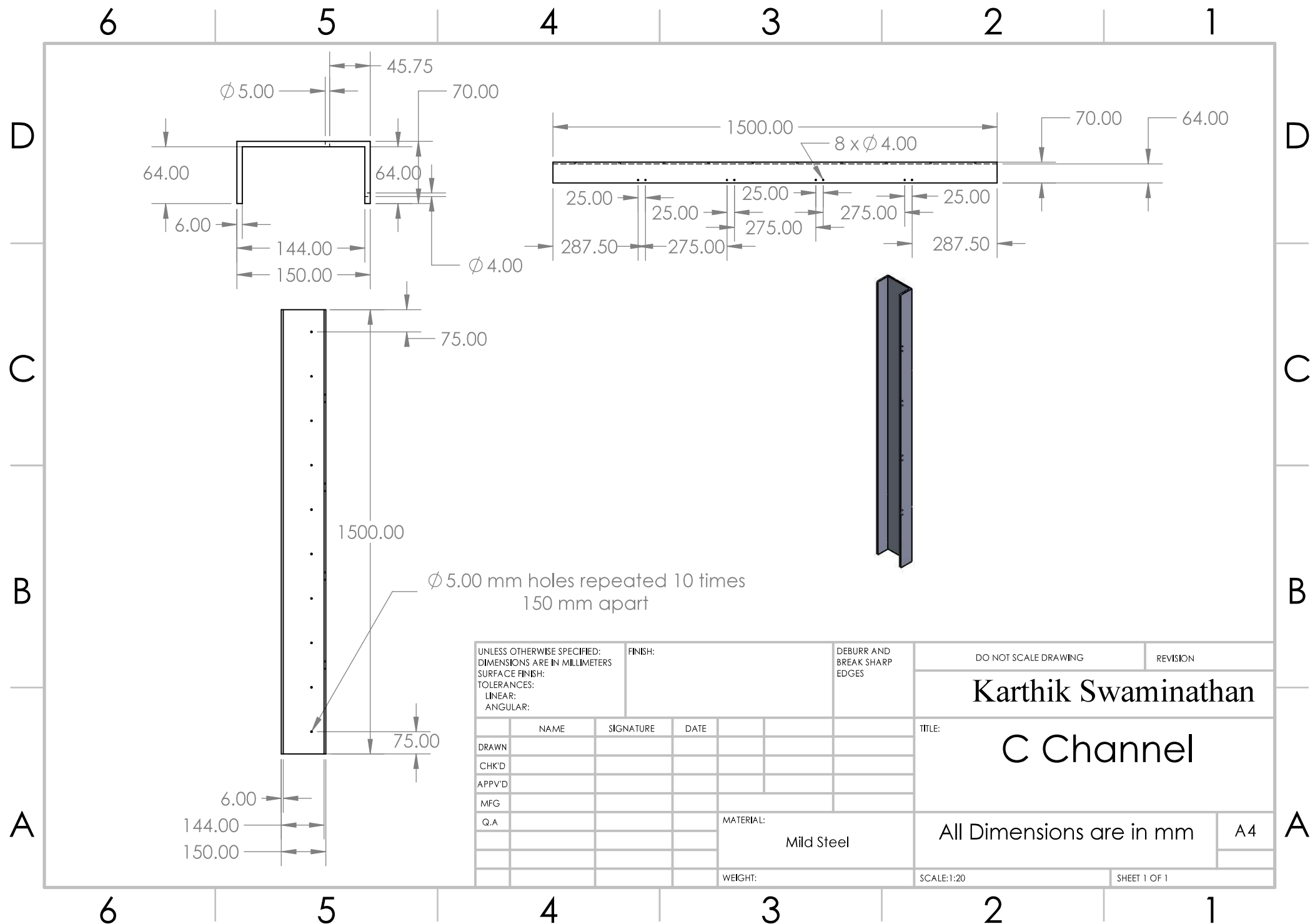


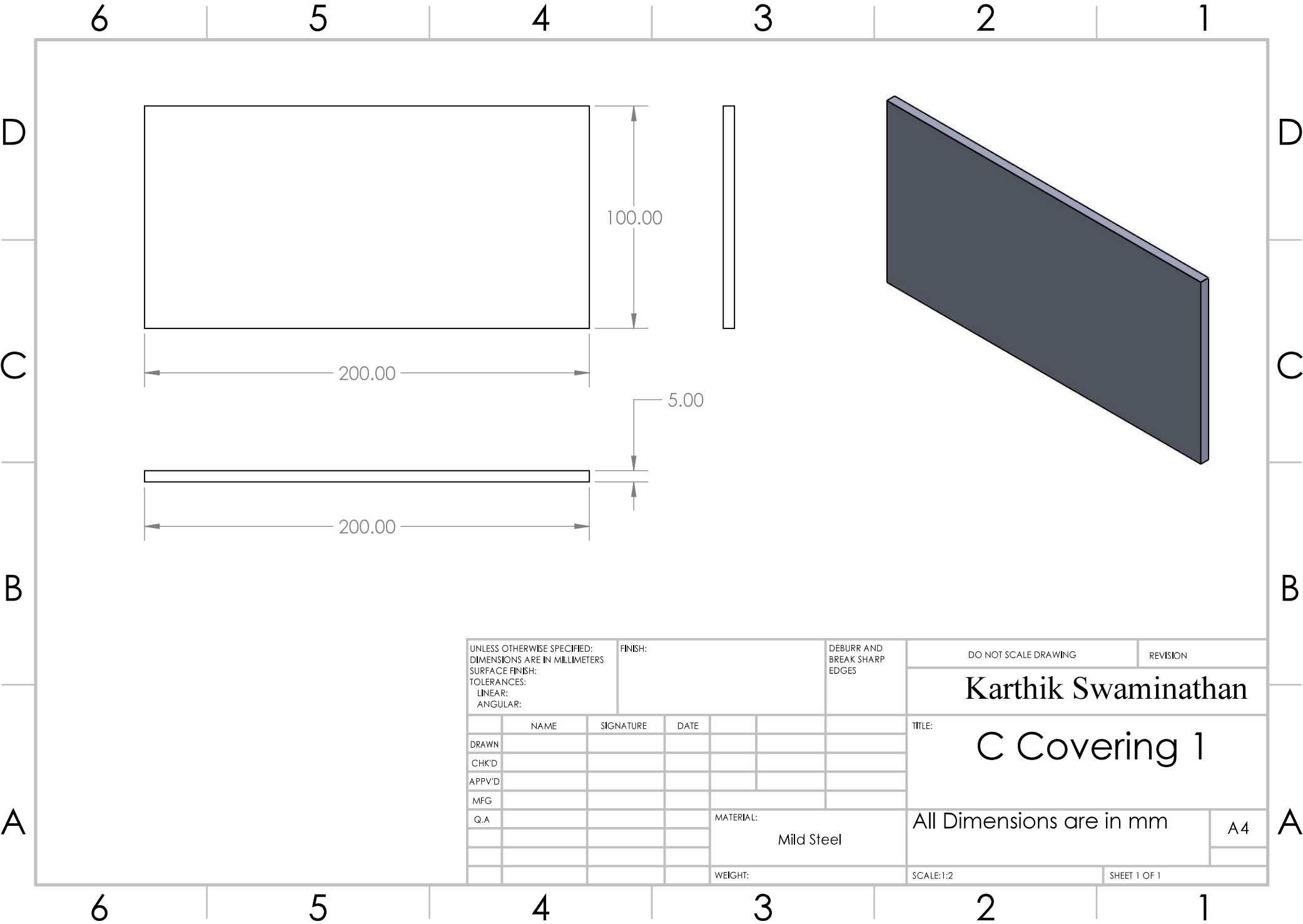
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:			DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION		
									Karthik Swaminathan				
DRAWN		NAME		SIGNATURE		DATE		TITLE:		ISMB 150			
CHK'D													
APPV'D										All Dimensions are in mm			
MFG													
Q.A										A4			
										SHEET 1 OF 1			
										SCALE:1:10			
										WEIGHT:			
										Mild Steel			
										SCALE:1:10			
										SHEET 1 OF 1			



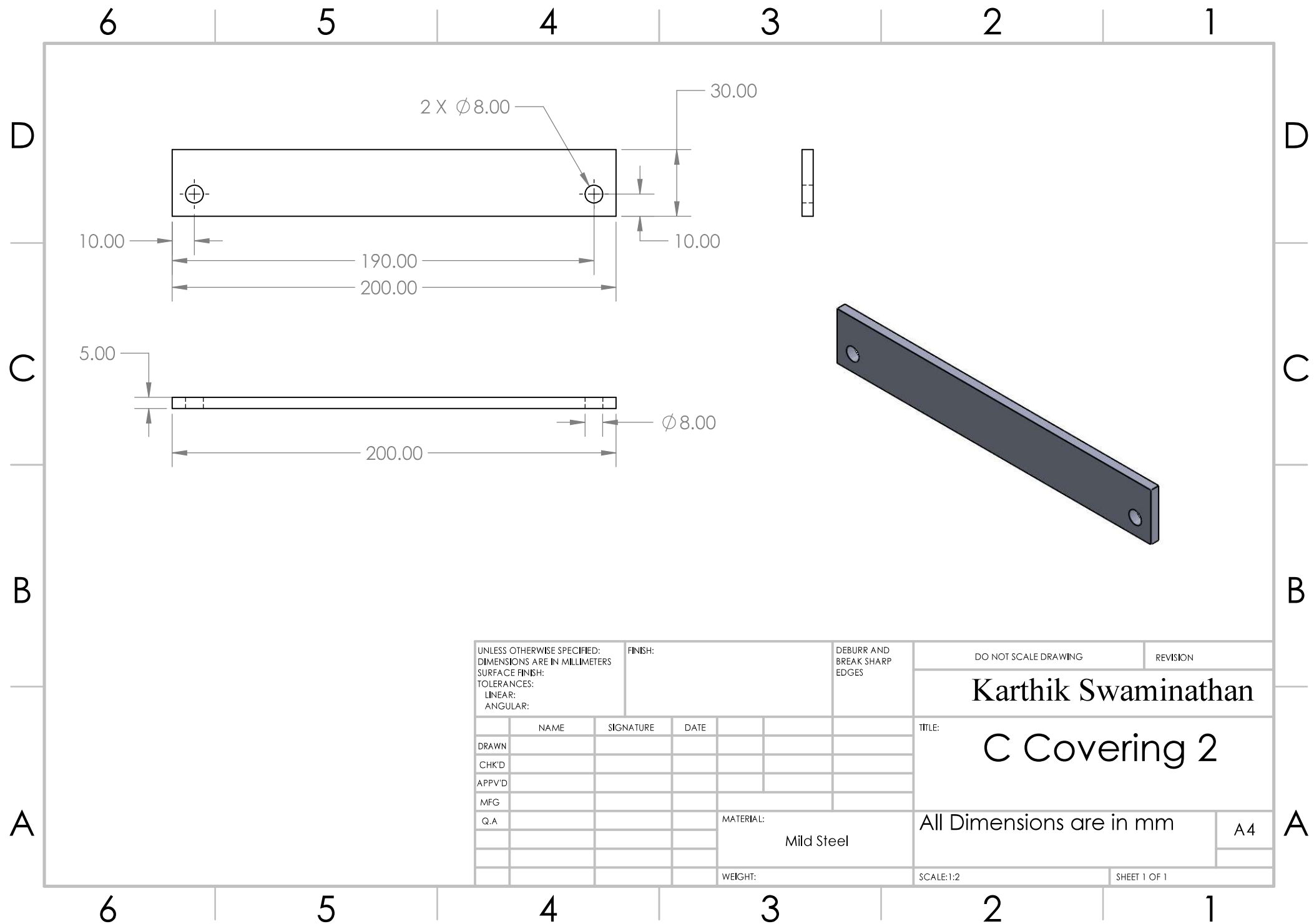
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:					FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
									Karthik Swaminathan			
	NAME		SIGNATURE		DATE				TITLE:		Top_Plate_X	
DRAWN												
CHK'D												
APPV'D												
MFG												
Q.A					MATERIAL: Mild Steel		All Dimensions are in mm		A4			
					WEIGHT:		SCALE:1:5		SHEET 1 OF 1			

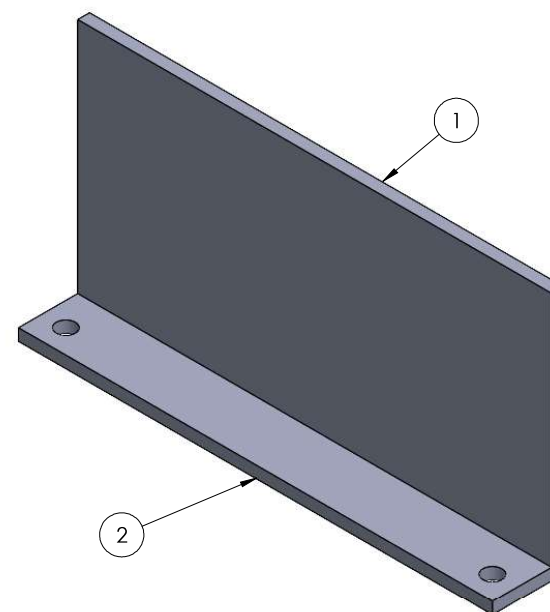
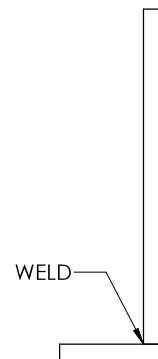
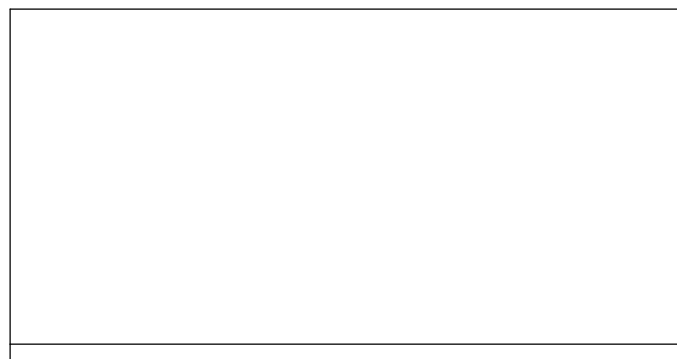






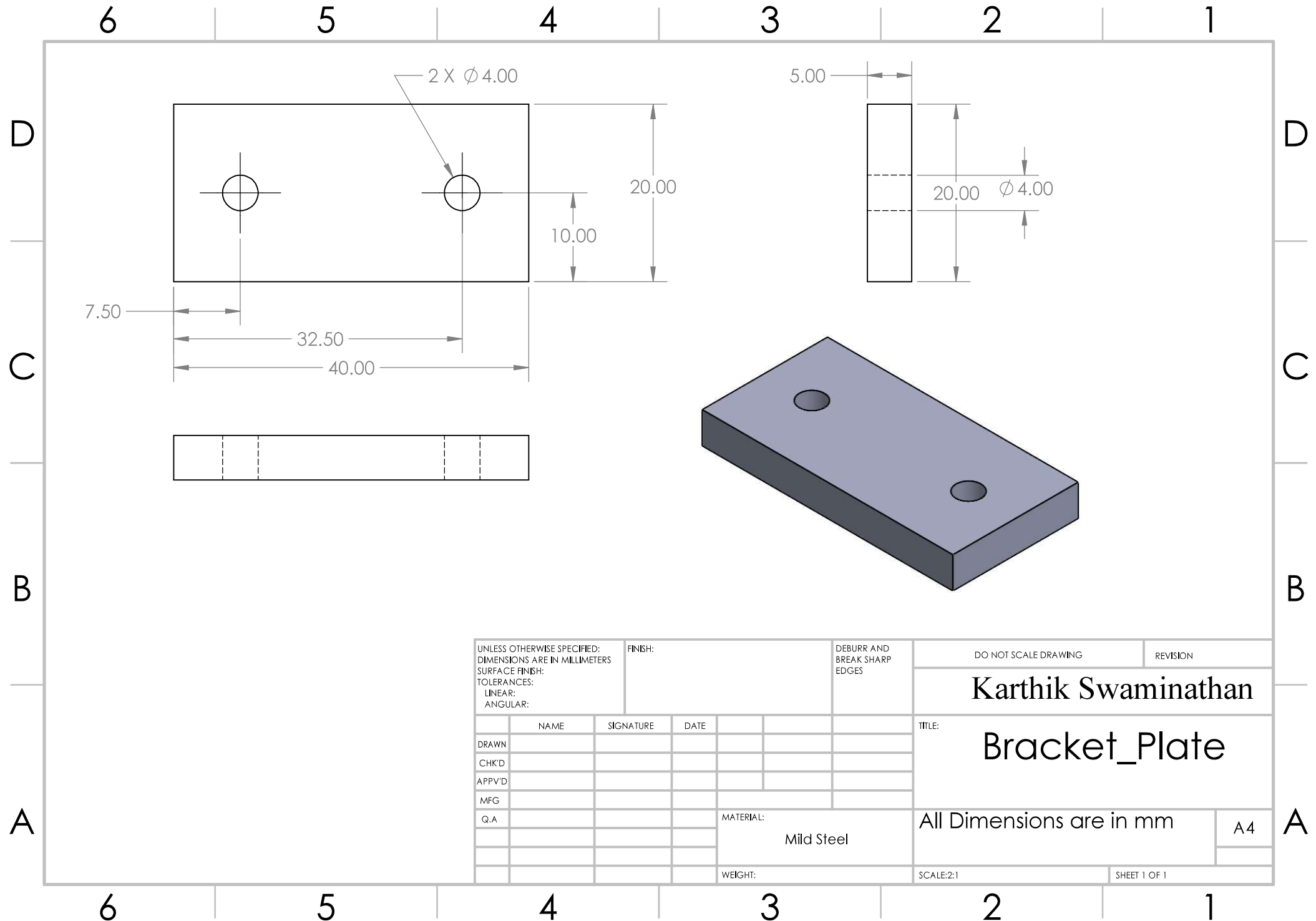
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:					FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
									Karthik Swaminathan			
	NAME		SIGNATURE		DATE				TITLE: C Covering 1			
DRAWN												
CHK'D												
APPV'D												
MFG												
Q.A												
							MATERIAL: Mild Steel		All Dimensions are in mm		A4	
							WEIGHT:		SCALE:1:2		SHEET 1 OF 1	

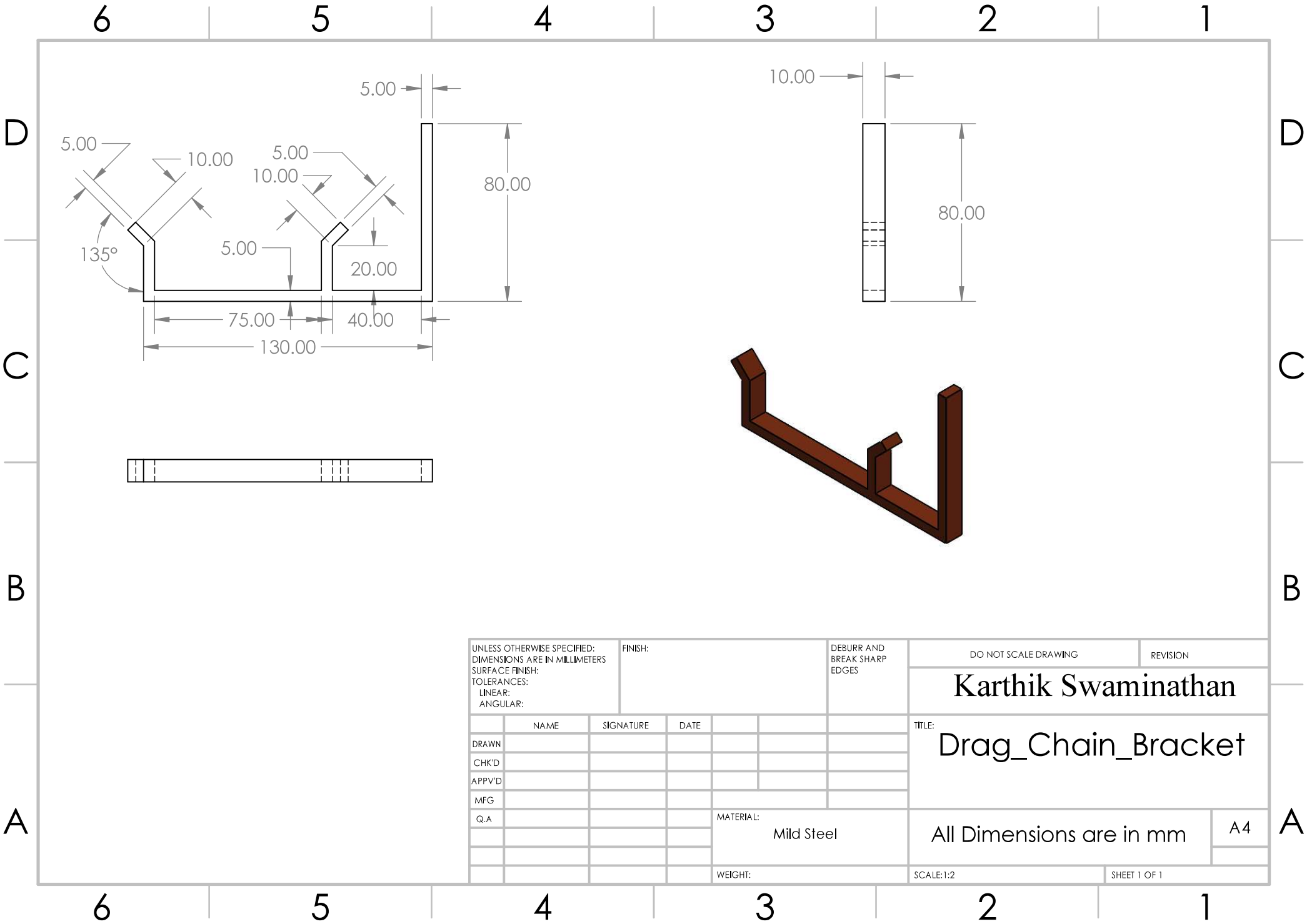




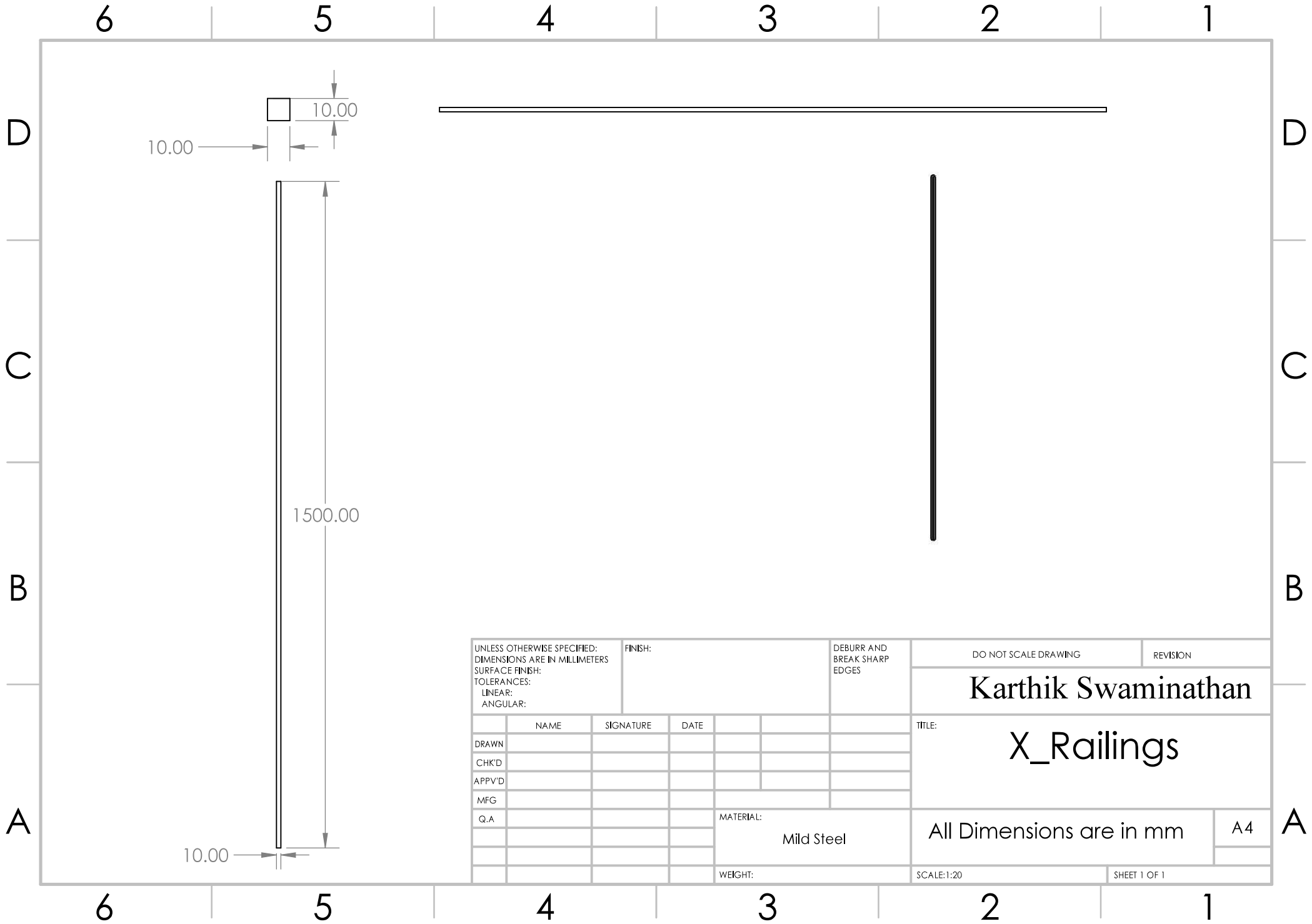
ITEM NO.	DESCRIPTION	Material	QTY.
1	C Covering 1	Mild Steel	1
2	C Covering 2	Mild Steel	1

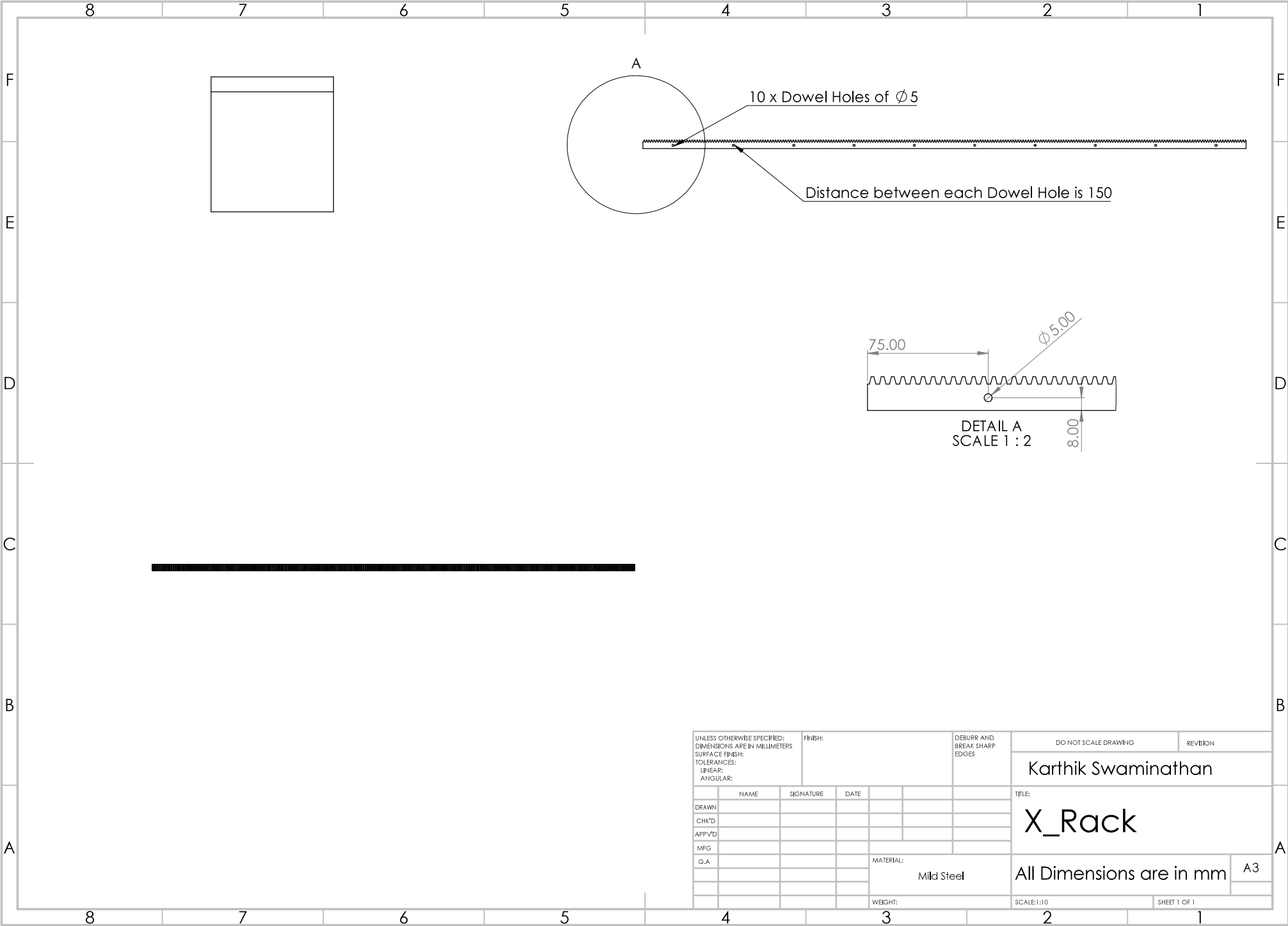
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
						<div>Karthik Swaminathan</div>			
SURFACE FINISH:		TOLERANCES:		LINEAR:		ANGULAR:		TITLE:	
								C_Covering	
DRAWN		NAME		SIGNATURE		DATE			
CHK'D									
APP'D									
MFG									
Q.A						MATERIAL:		All Dimensions are in mm	
								A3	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	



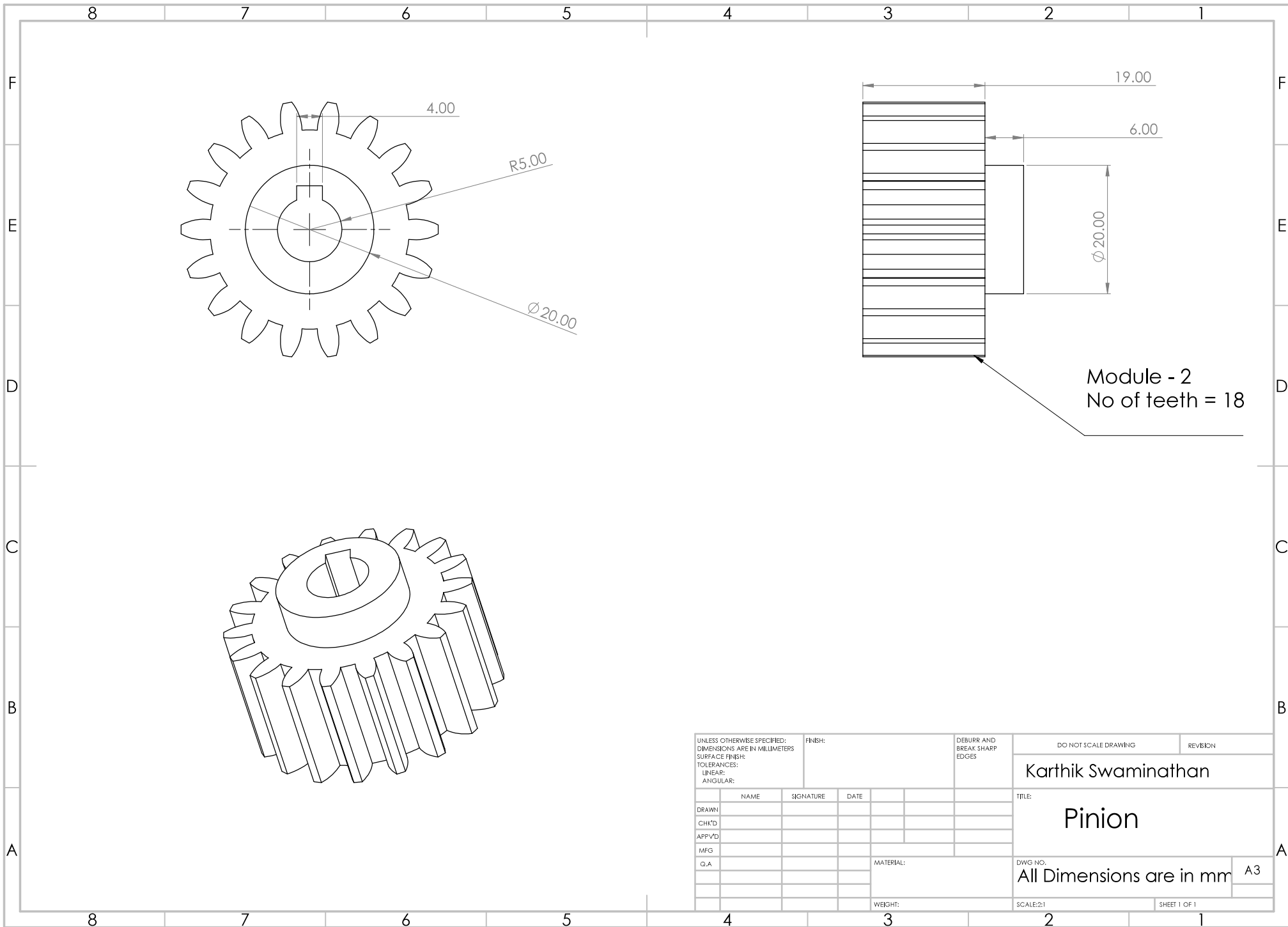


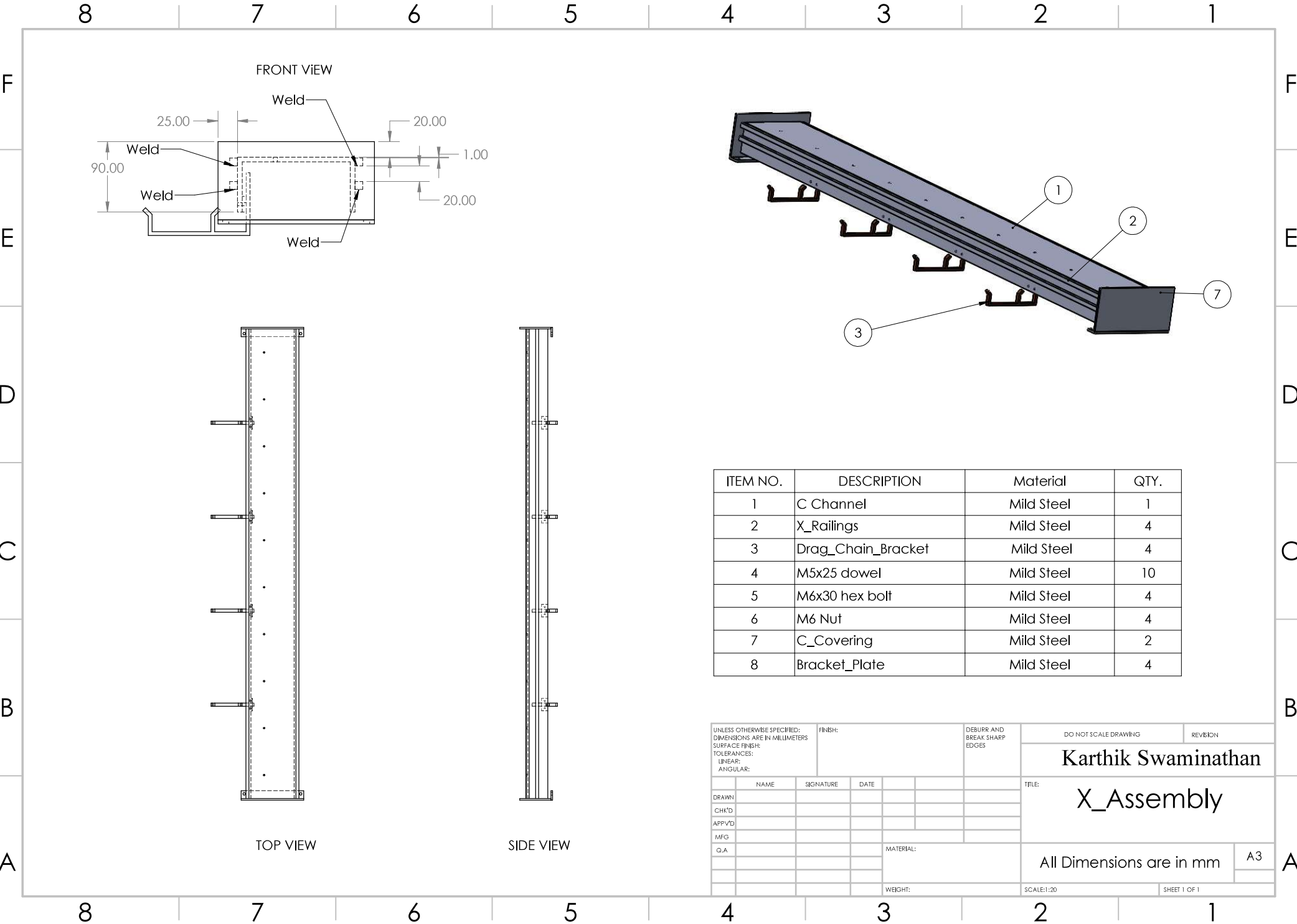
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
								Karthik Swaminathan			
								TITLE: Drag_Chain_Bracket			
DRAWN				NAME		SIGNATURE		DATE			
CHK'D											
APPV'D											
MFG											
Q.A								MATERIAL:			
								Mild Steel		All Dimensions are in mm	
										A4	
								WEIGHT:		SCALE:1:2	
										SHEET 1 OF 1	

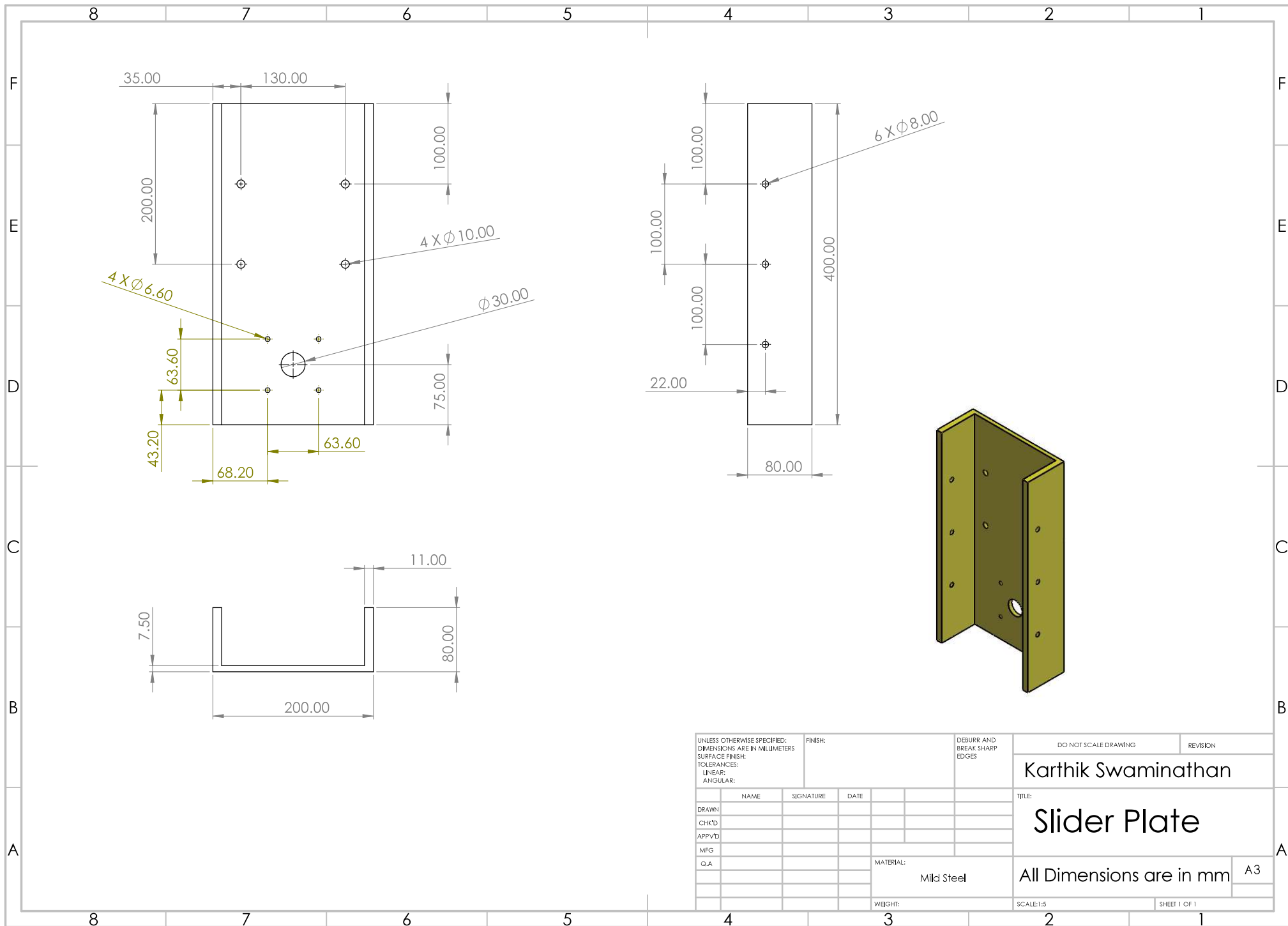


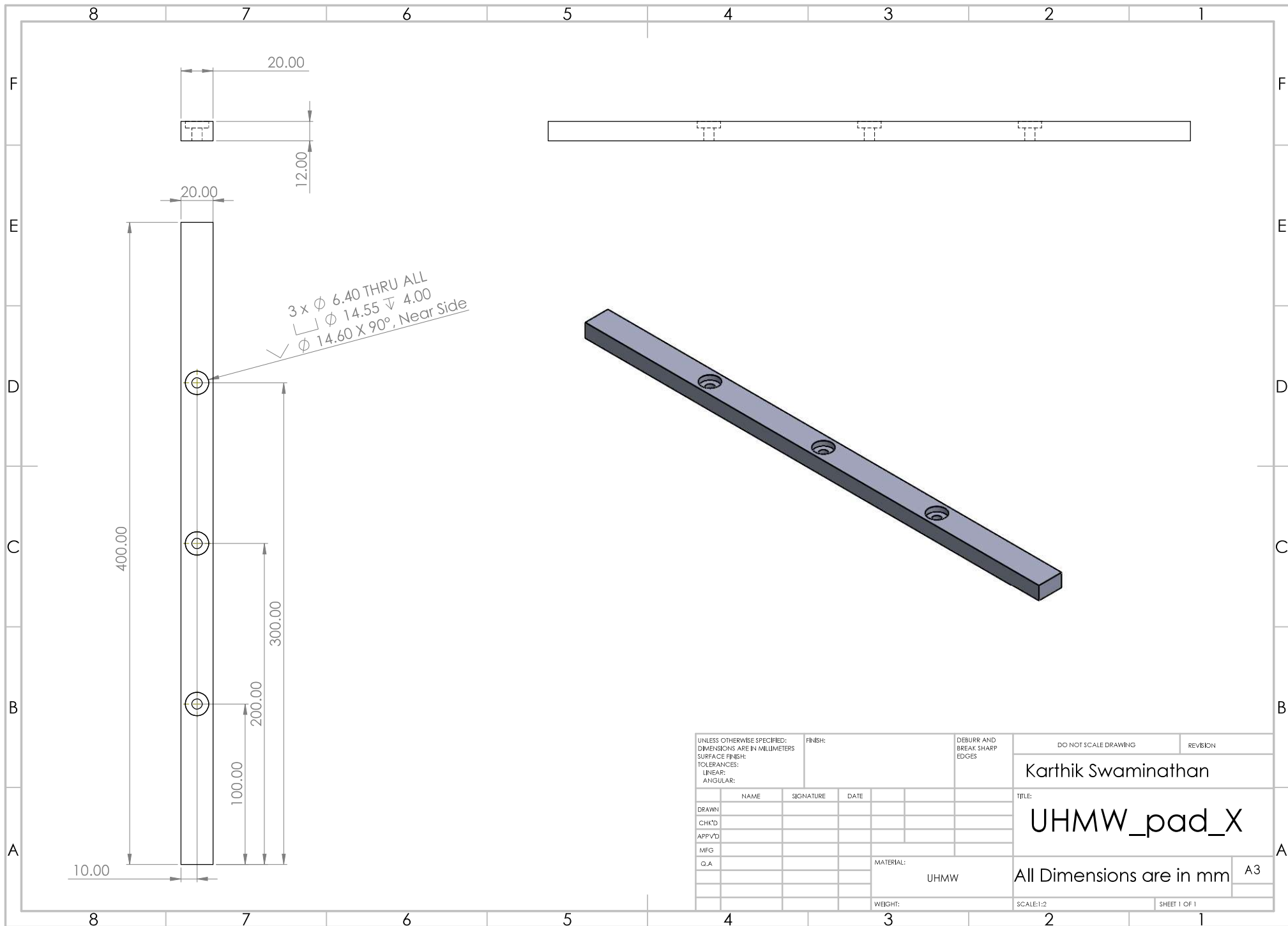


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
								Karthik Swaminathan			
		NAME	SIGNATURE	DATE				TITLE:			
DRAWN								X_Rack			
CHK'D											
APP'VD								All Dimensions are in mm			
MFG											
Q.A								SCALE:1:10		SHEET 1 OF 1	
										A3	
								</			

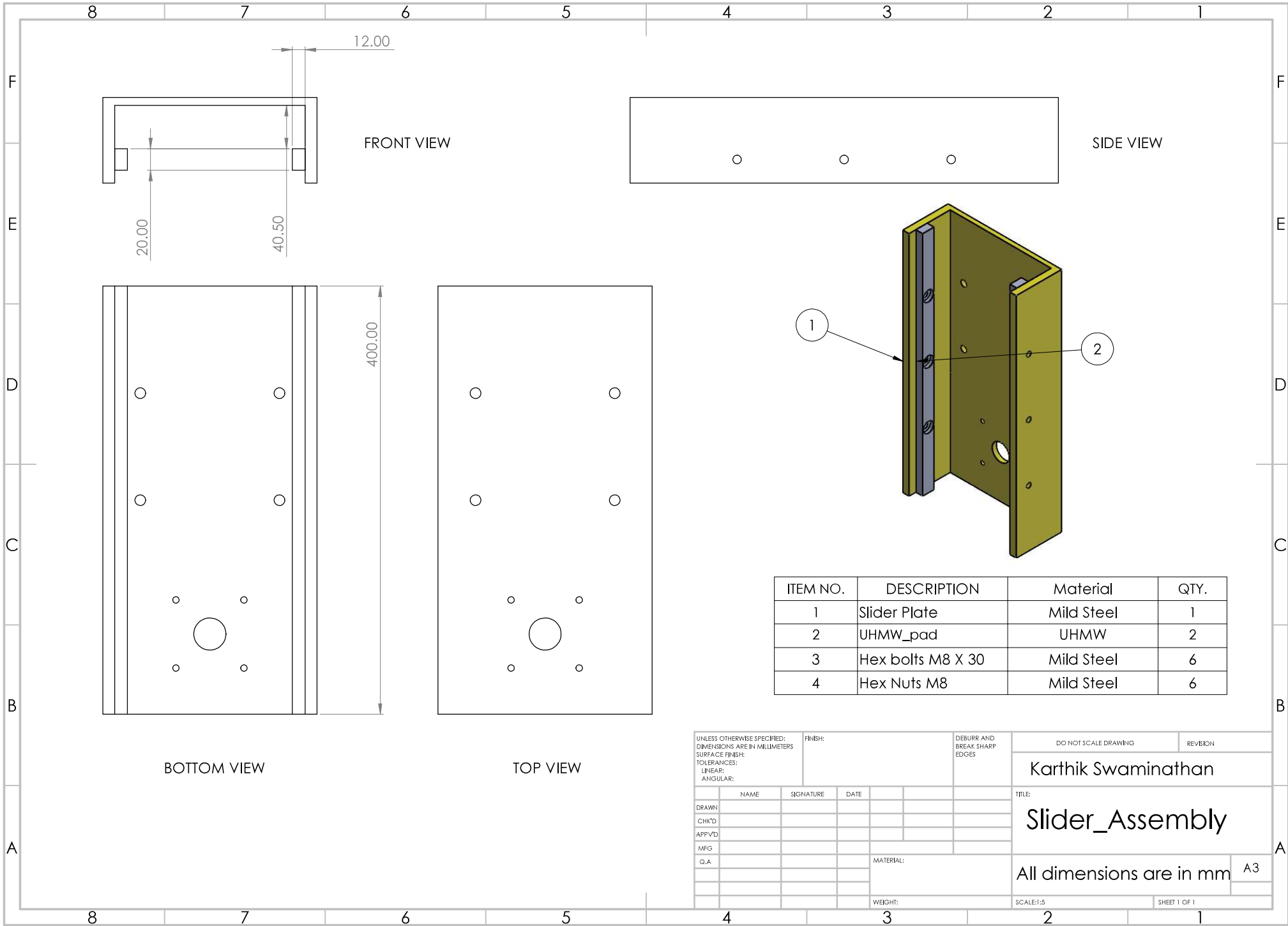






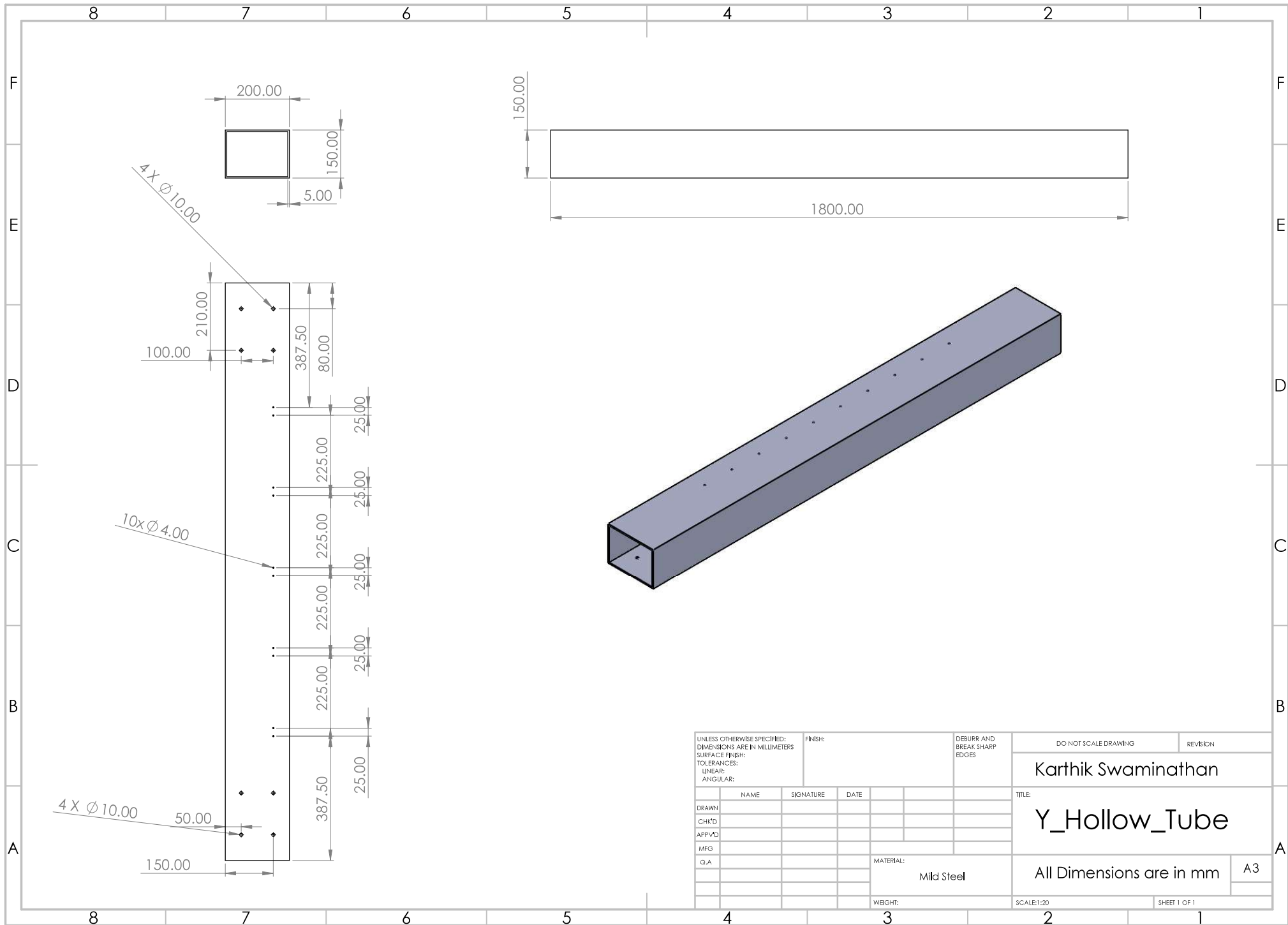


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
								Karthik Swaminathan			
SURFACE FINISH:								TITLE:			
TOLERANCES:								UHMW_pad_X			
LINEAR:											
ANGULAR:											
DRAWN		NAME	SIGNATURE	DATE							
CHK'D											
APP'VD											
MFG											
Q.A								MATERIAL:			
								UHMW			
								WEIGHT:			
								SCALE:1:2		SHEET 1 OF 1	
								All Dimensions are in mm		A3	

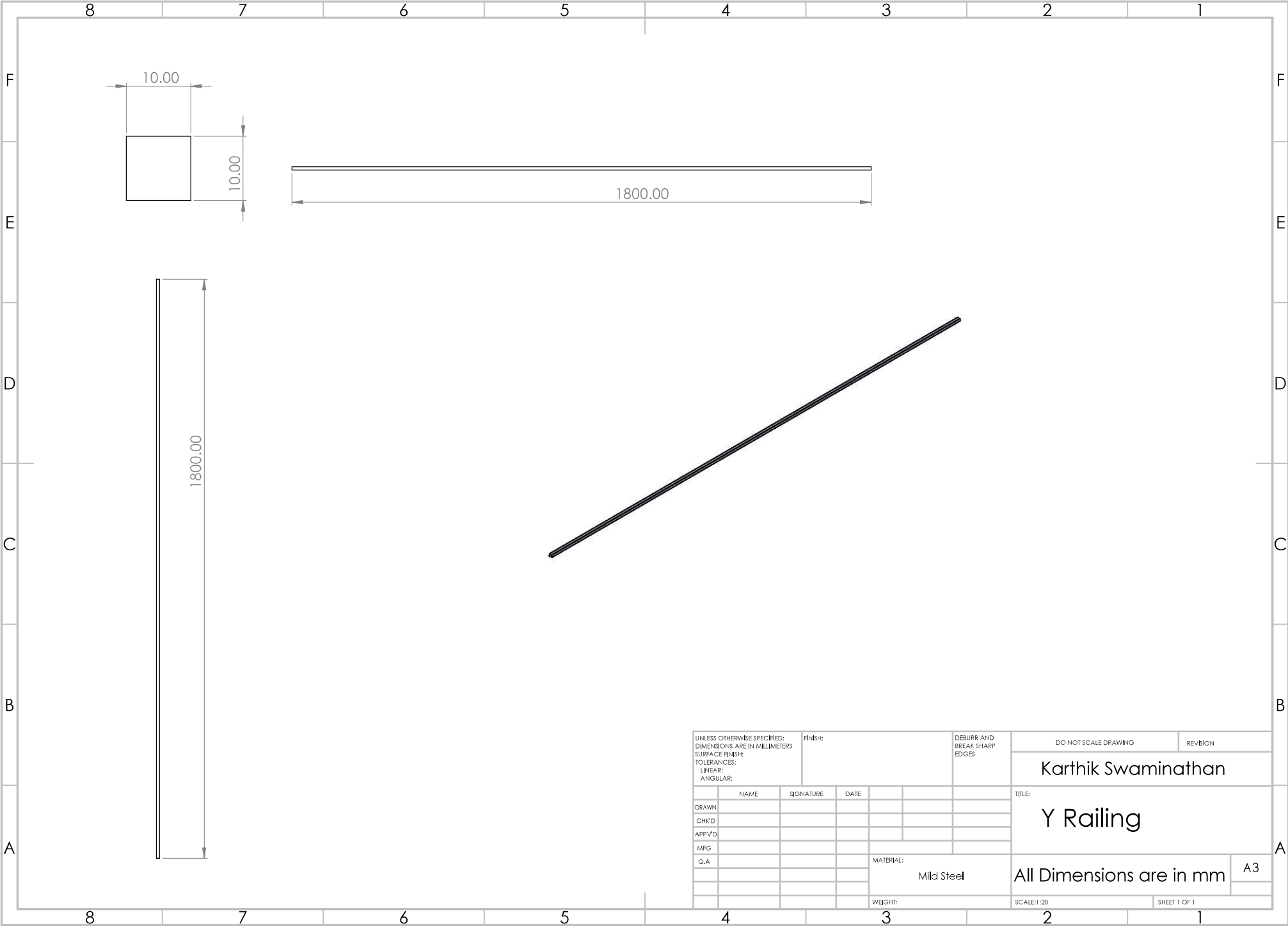


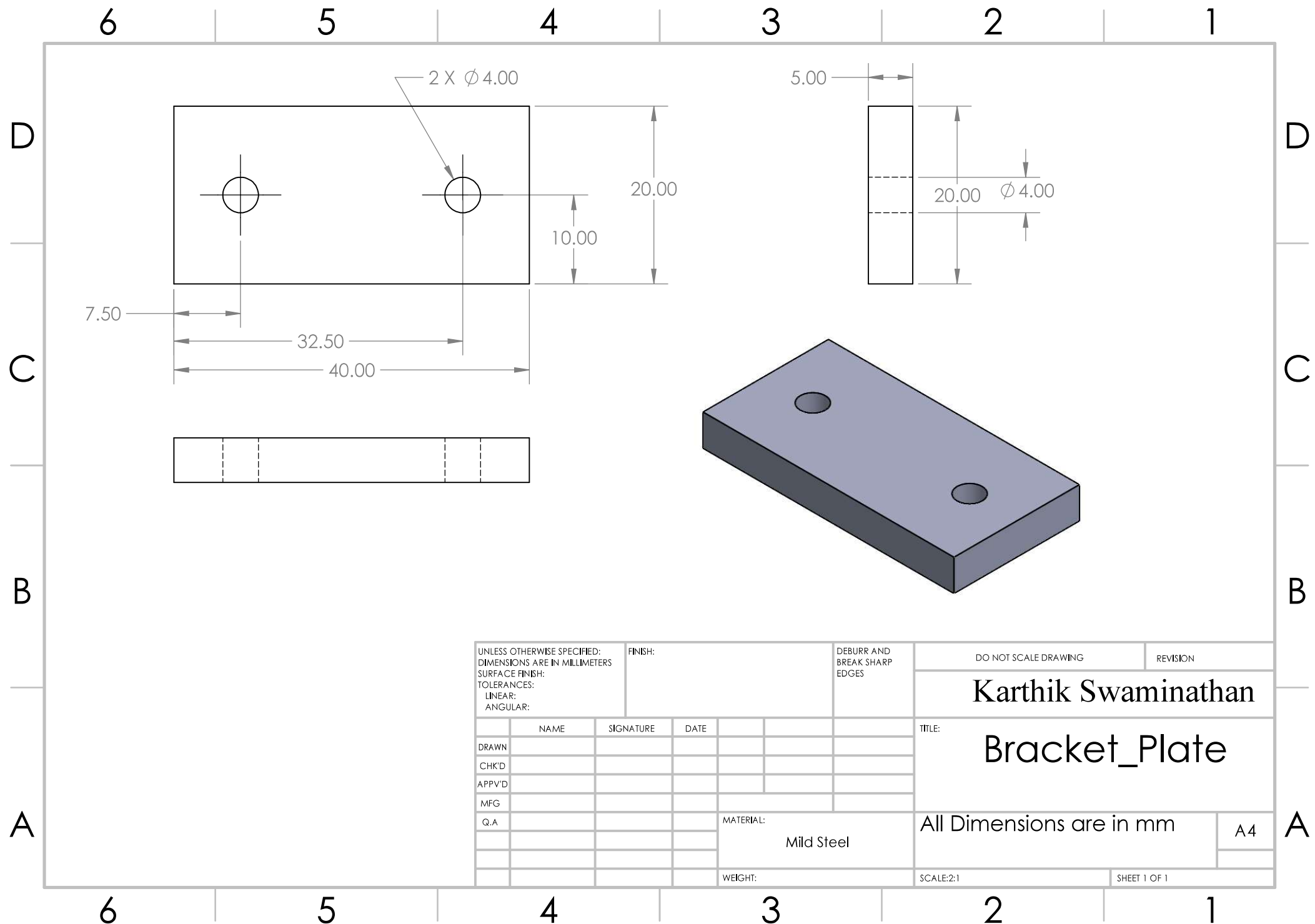
ITEM NO.	DESCRIPTION	Material	QTY.
1	Slider Plate	Mild Steel	1
2	UHMW_pad	UHMW	2
3	Hex bolts M8 X 30	Mild Steel	6
4	Hex Nuts M8	Mild Steel	6

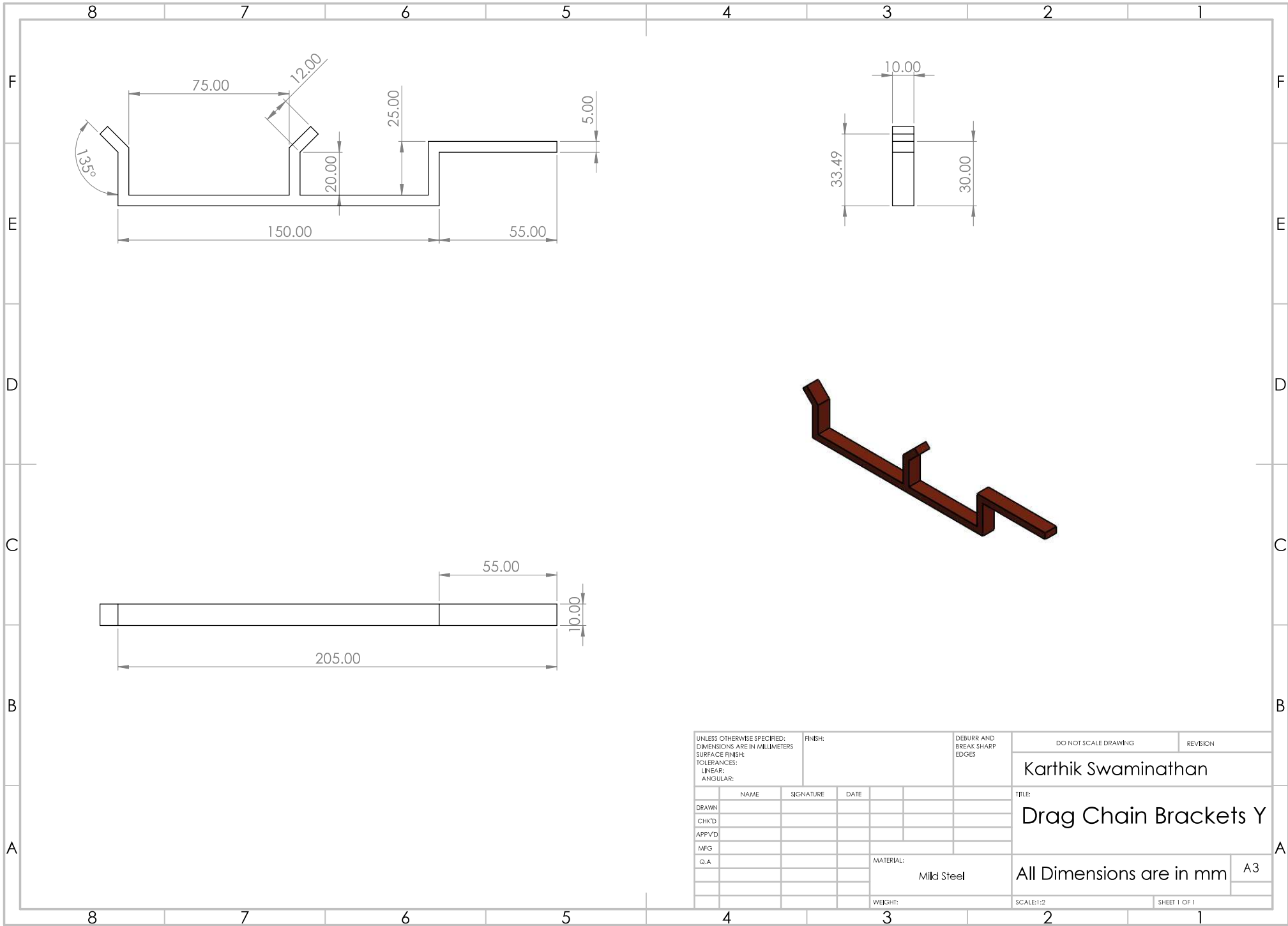
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:						Karthik Swaminathan			
TOLERANCES:						TITLE:			
LINEAR:						Slider_Assembly			
ANGULAR:						All dimensions are in mm		A3	
DRAWN	NAME	SIGNATURE	DATE			MATERIAL:			
CHK'D						WEIGHT:			
APP'VD						SCALE:1:5		SHEET 1 OF 1	
MFG									
G.A									



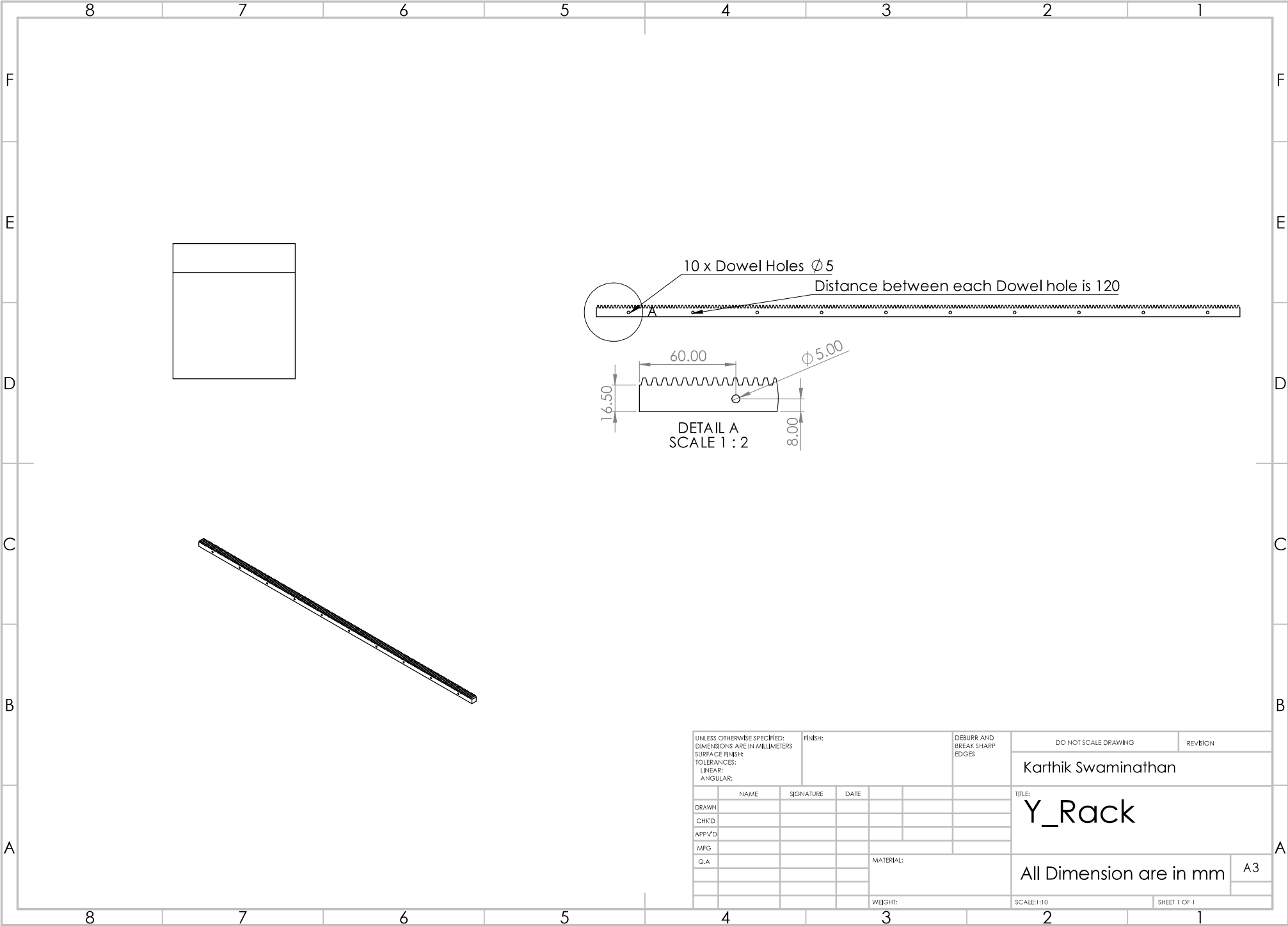
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:	FINISH:	DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING		REVISION
					Karthik Swaminathan
DRAWN	NAME	SIGNATURE	DATE	TITLE: Y_Hollow_Tube	
CHK'D					
APP'VD					
MFG					
G.A					
				MATERIAL: Mild Steel	
				WEIGHT:	
				SCALE:1:20	
				SHEET 1 OF 1	
				A3	

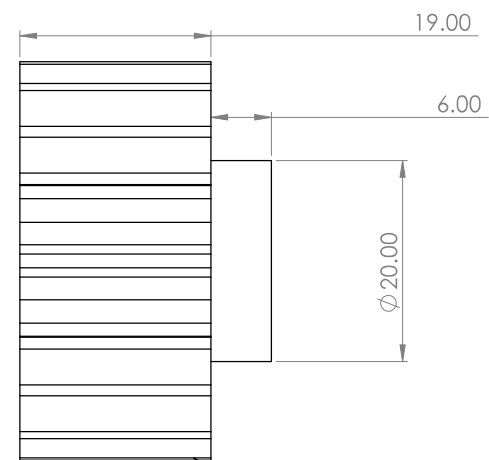
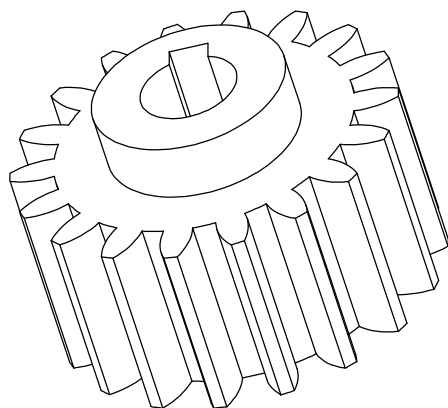
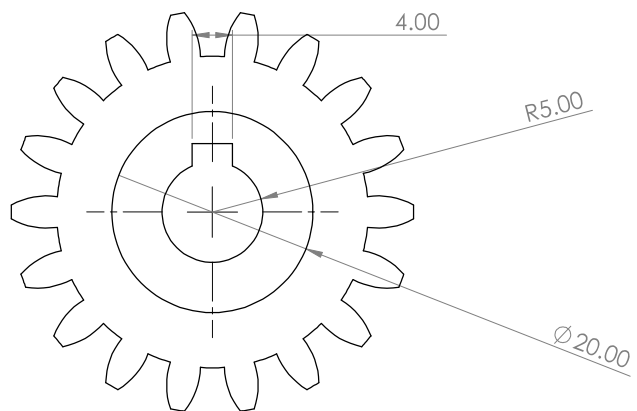






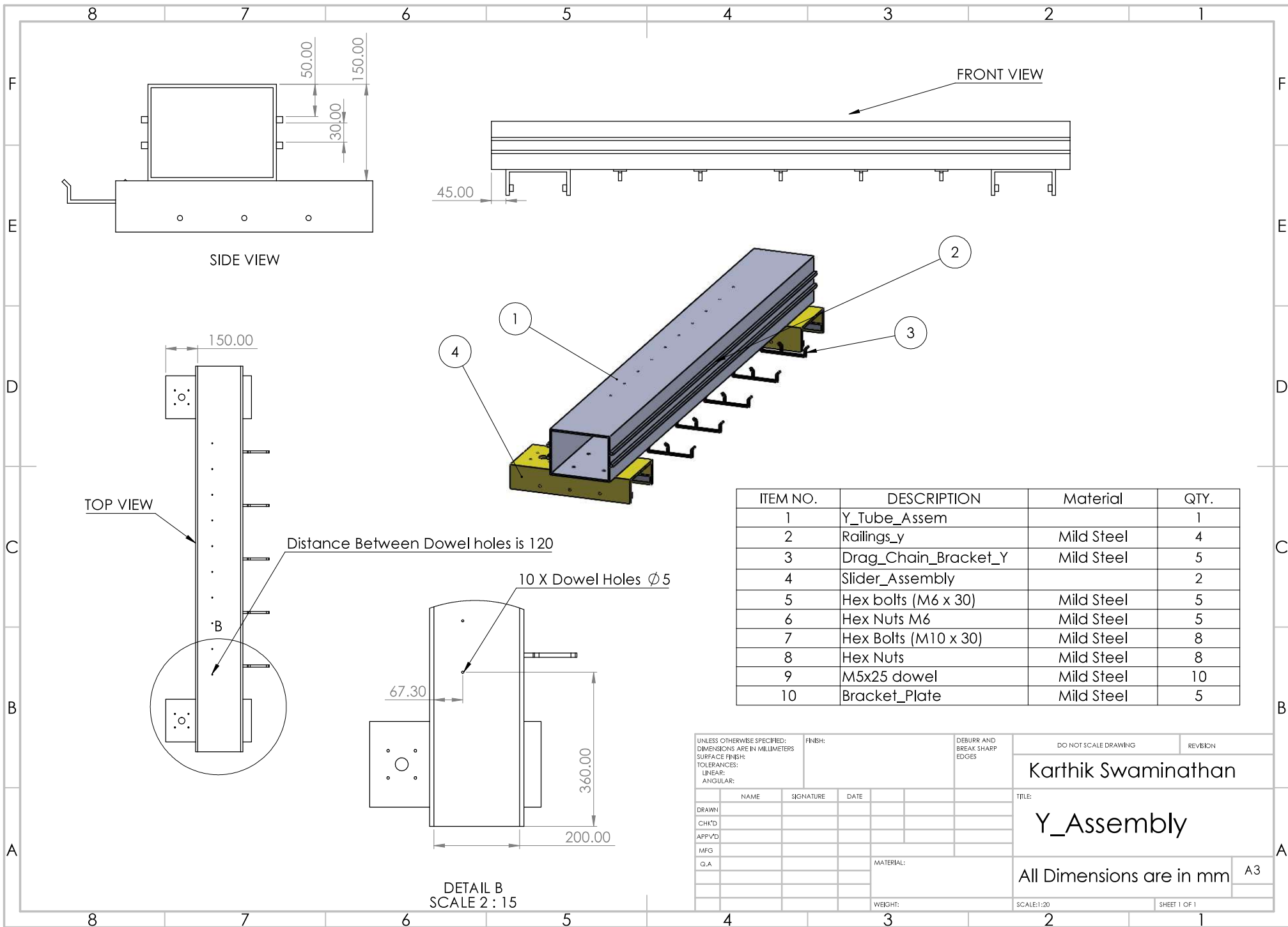
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
								Karthik Swaminathan			
		NAME	SIGNATURE	DATE			TITLE:				
DRAWN							Drag Chain Brackets Y				
CHK'D											
APP'VD											
MFG											
Q.A							MATERIAL:		All Dimensions are in mm		
							Mild Steel				
							WEIGHT:		SCALE:1:2		SHEET 1 OF 1

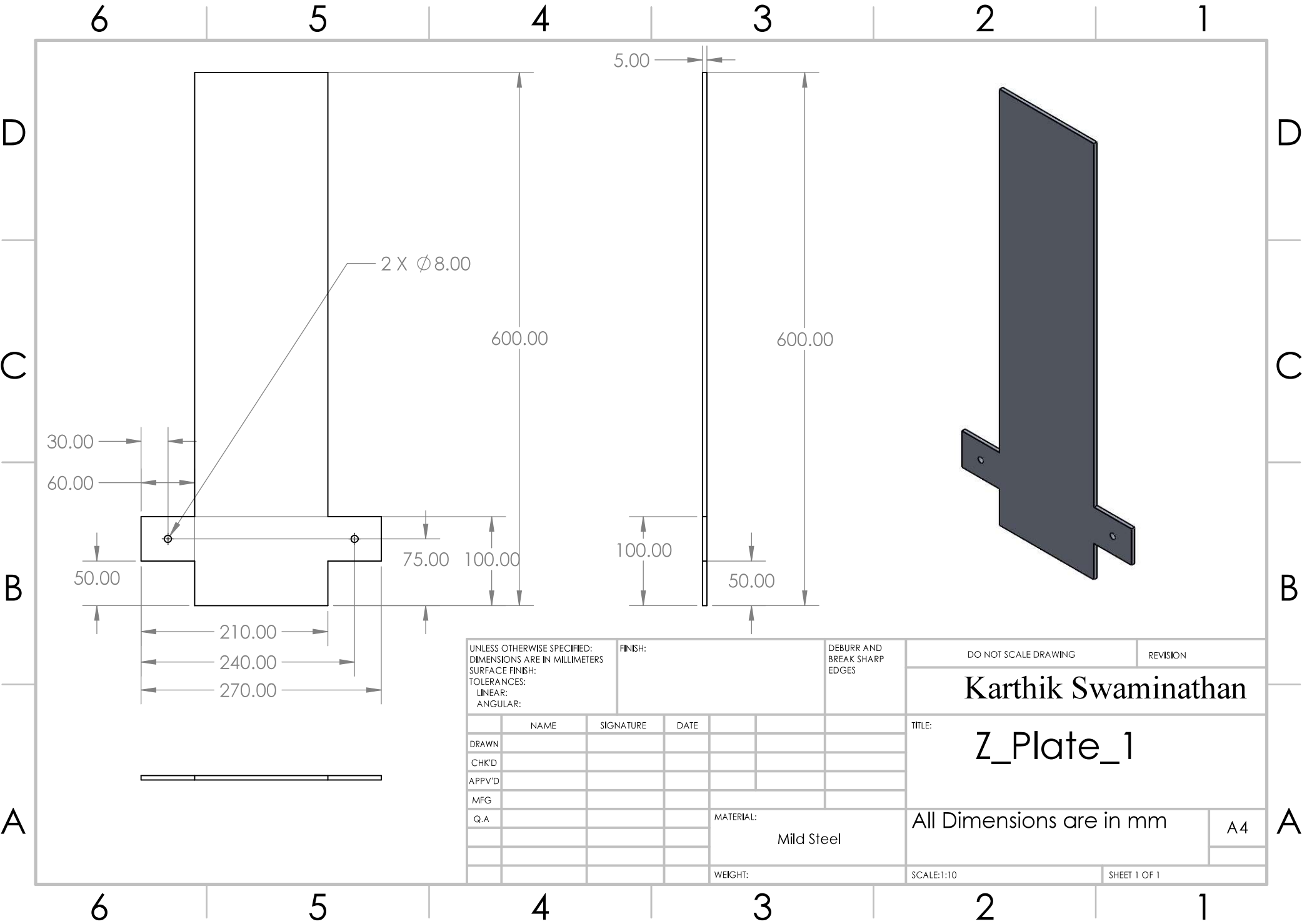


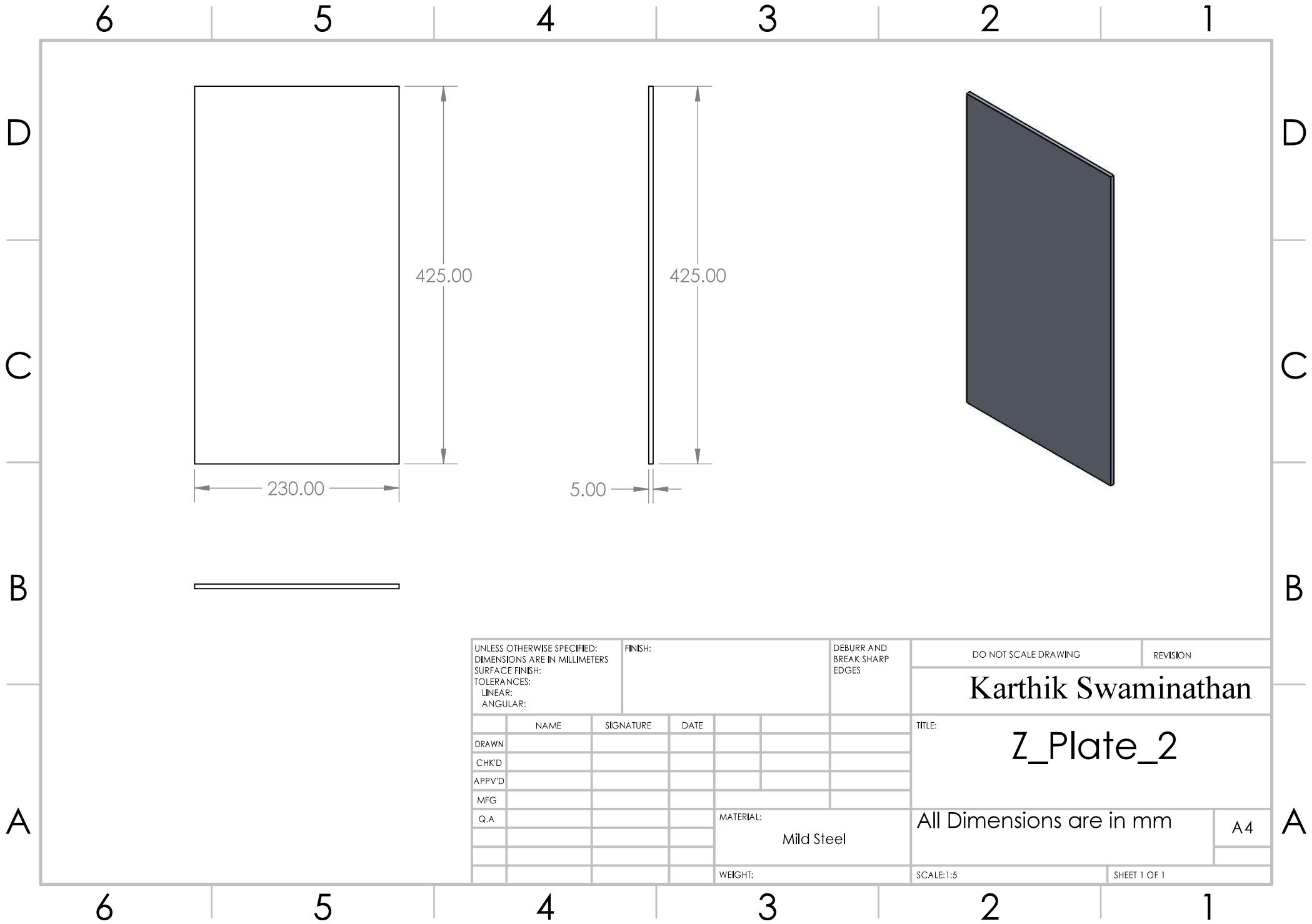


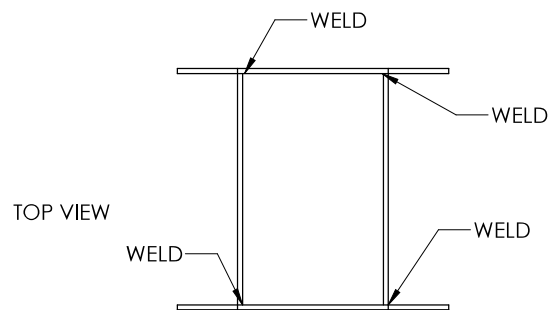
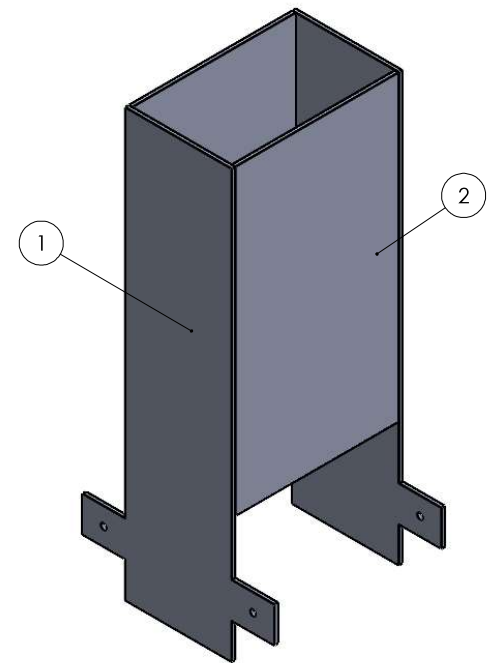
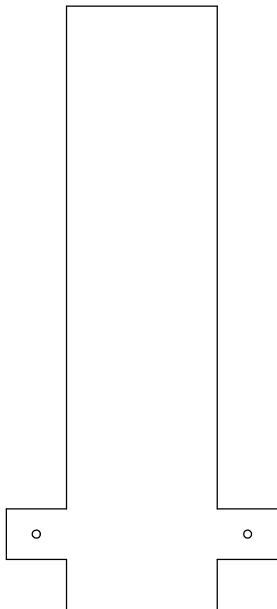
Module - 2
No of teeth = 18

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:								Karthik Swaminathan			
NAME		SIGNATURE		DATE				TITLE:			
DRAWN								Pinion			
CHK'D											
APP'D											
MFG											
Q.A.						MATERIAL:		DWG NO.		A3	
								All Dimensions are in mm			
								SCALE: 2:1		SHEET 2 OF 1	
						WEIGHT:					



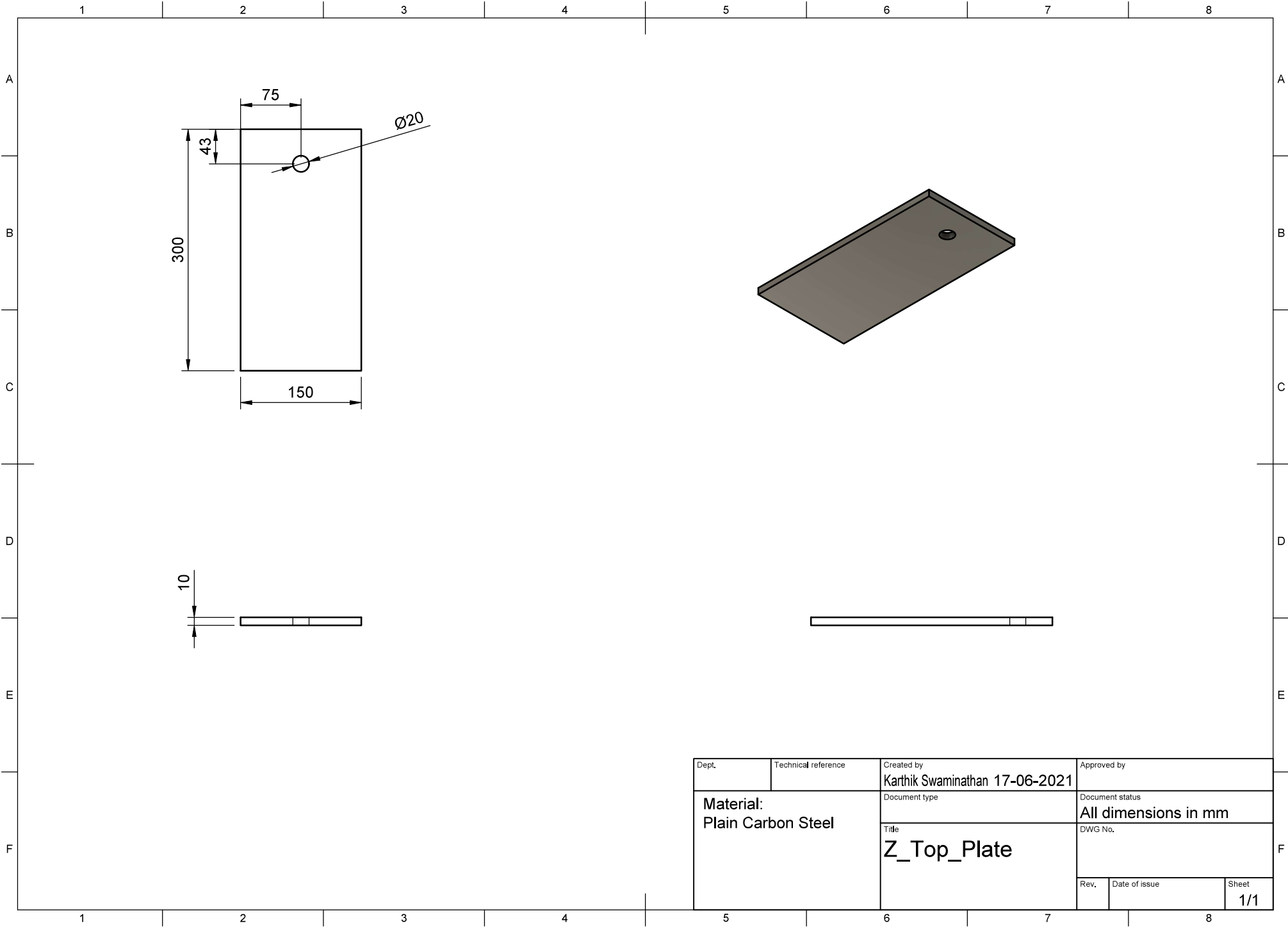


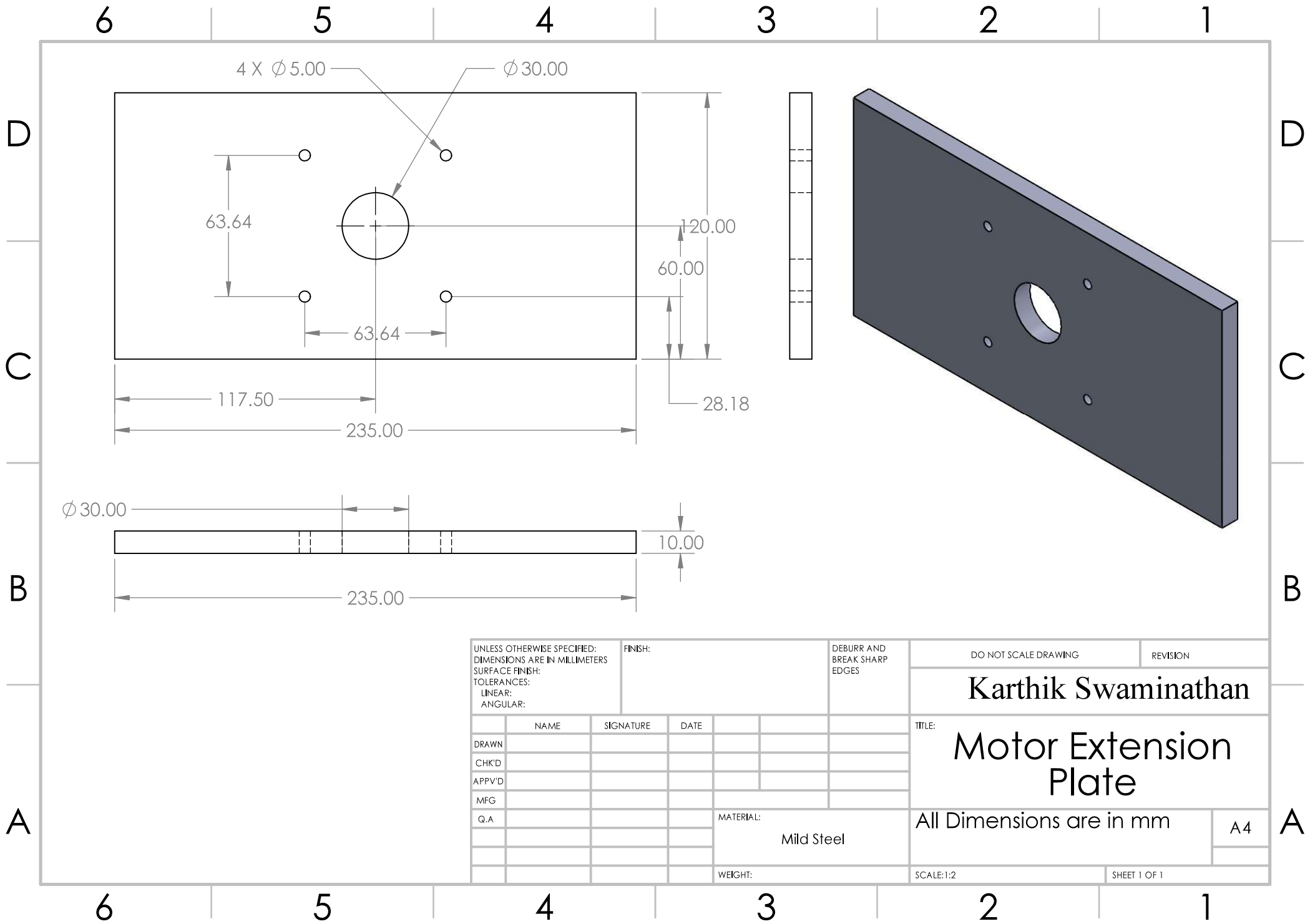


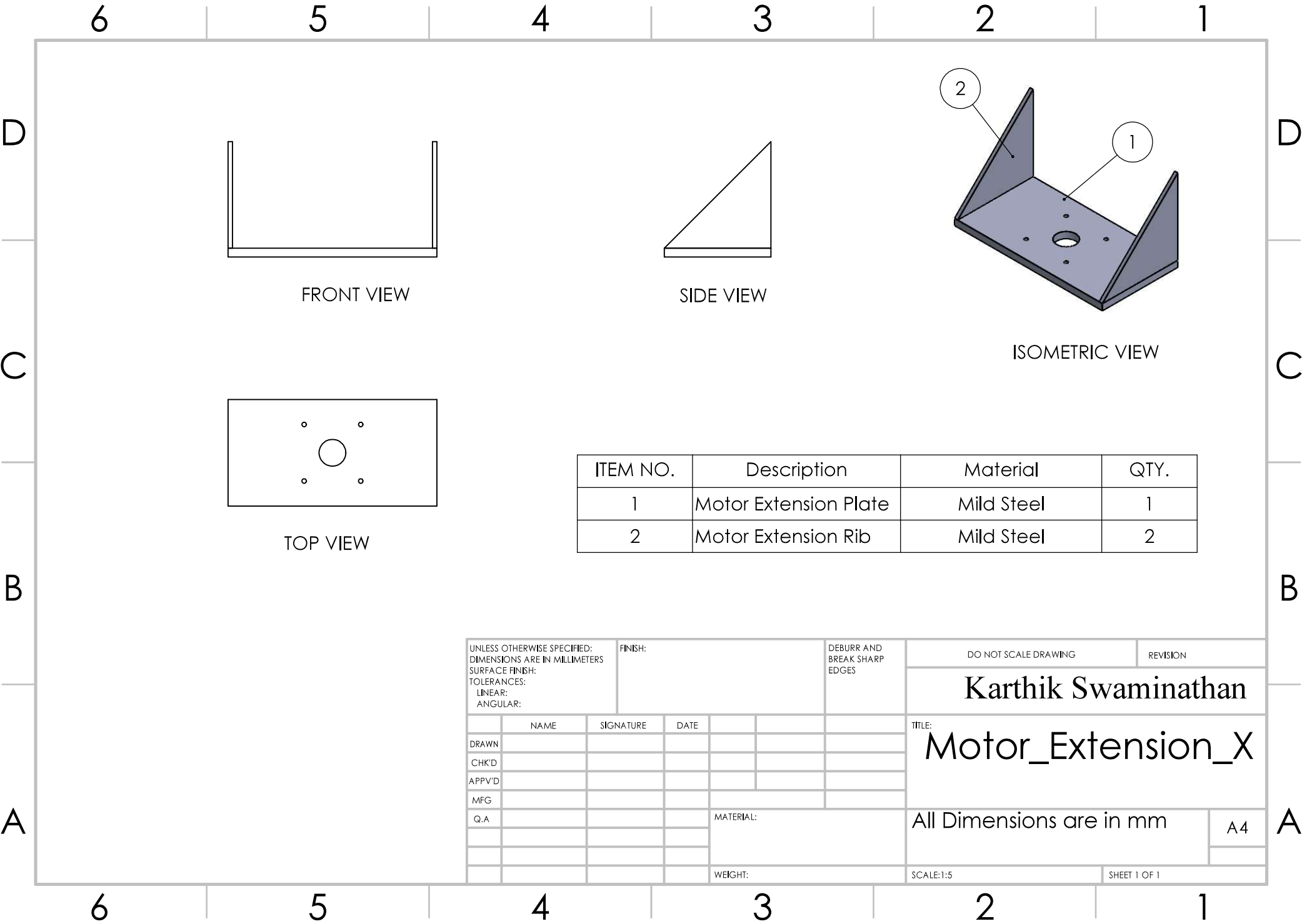


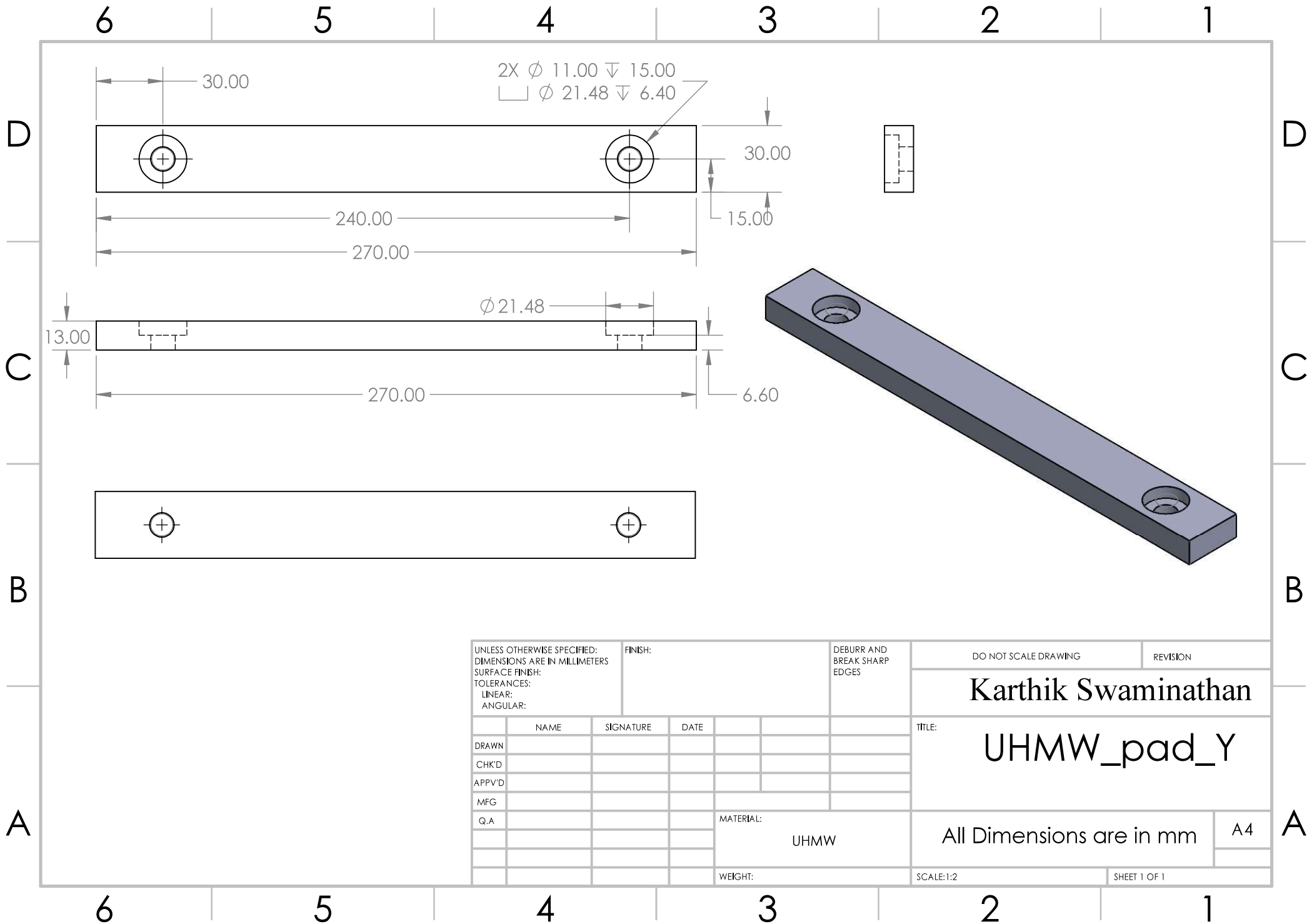
ITEM NO.	DESCRIPTION	Material	QTY.
1	Z_Plate_1	Mild Steel	2
2	Z_Plate_2	Mild Steel	2

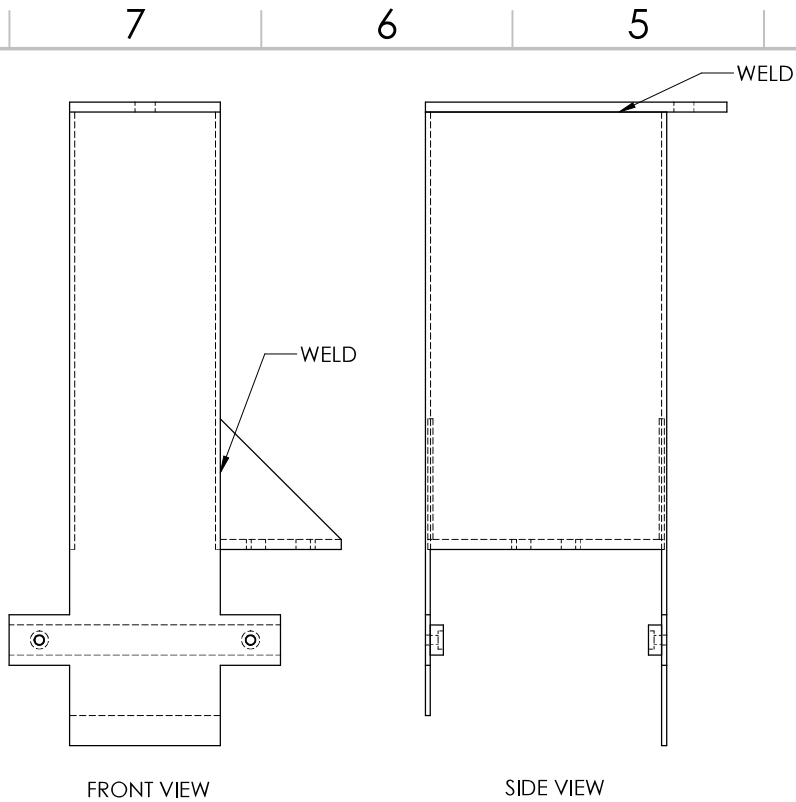
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
								<h1 style="margin: 0;">Karthik Swaminathan</h1>			
								TITLE: <div style="font-size: 2em; font-weight: bold; margin-left: 10px;">Z_Column_Assem</div>			
DRAWN		NAME		SIGNATURE		DATE					
CHK'D											
APP'D											
MFG											
Q.A						MATERIAL:					
						WEIGHT:					
								SCALE:1:10		SHEET 1 OF 1	
								All Dimensions are in mm <div style="float: right; font-size: 1.5em; font-weight: bold;">A3</div>			





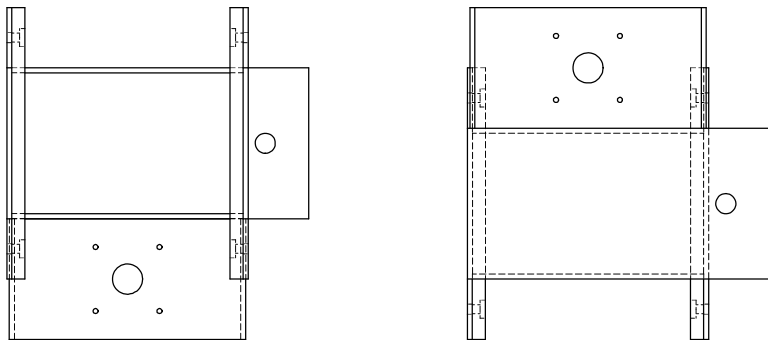






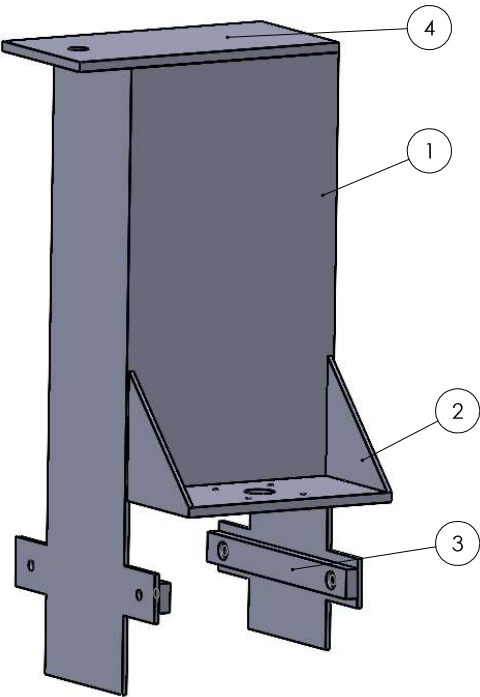
FRONT VIEW

SIDE VIEW



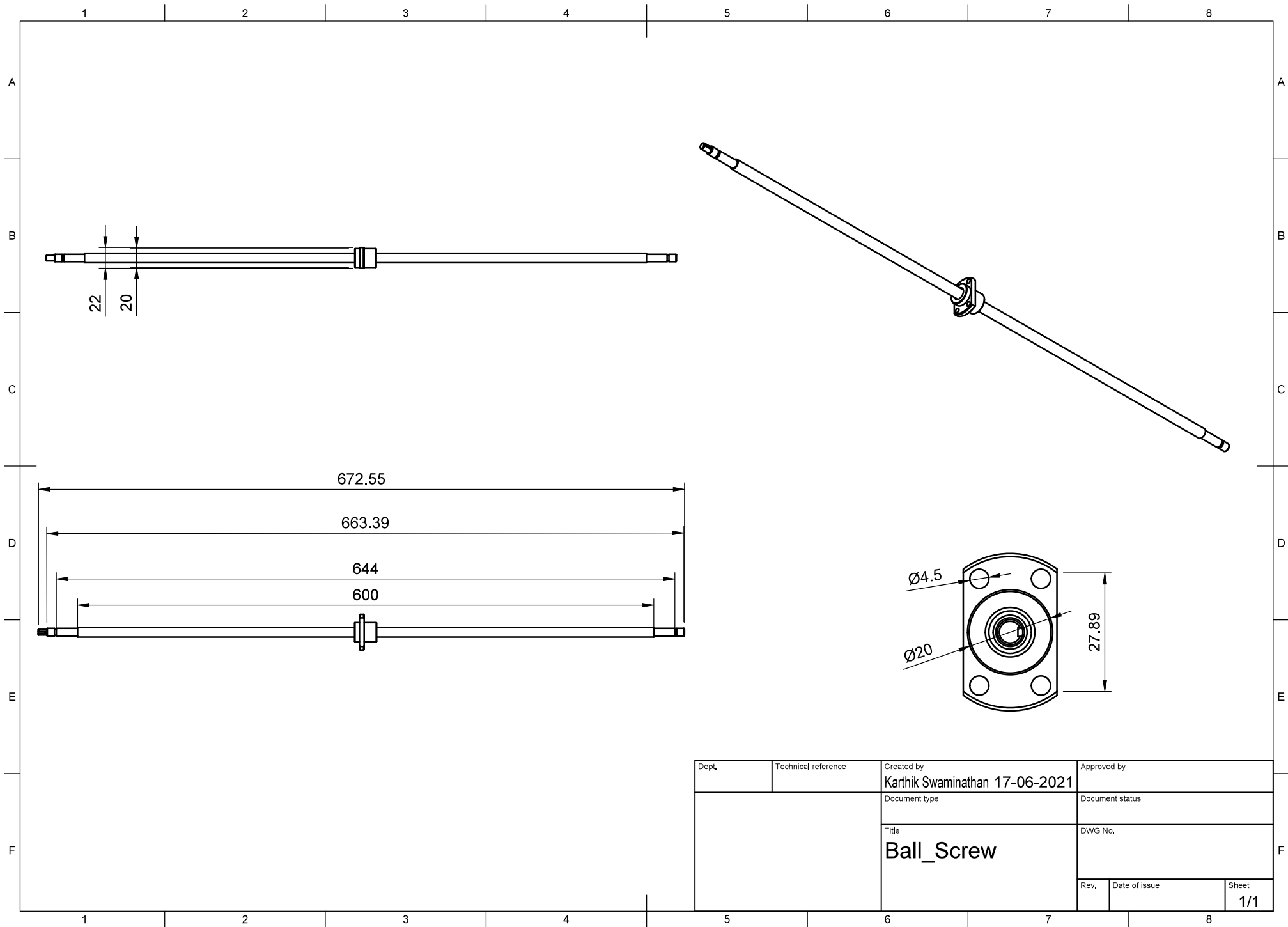
BOTTOM VIEW

TOP VIEW

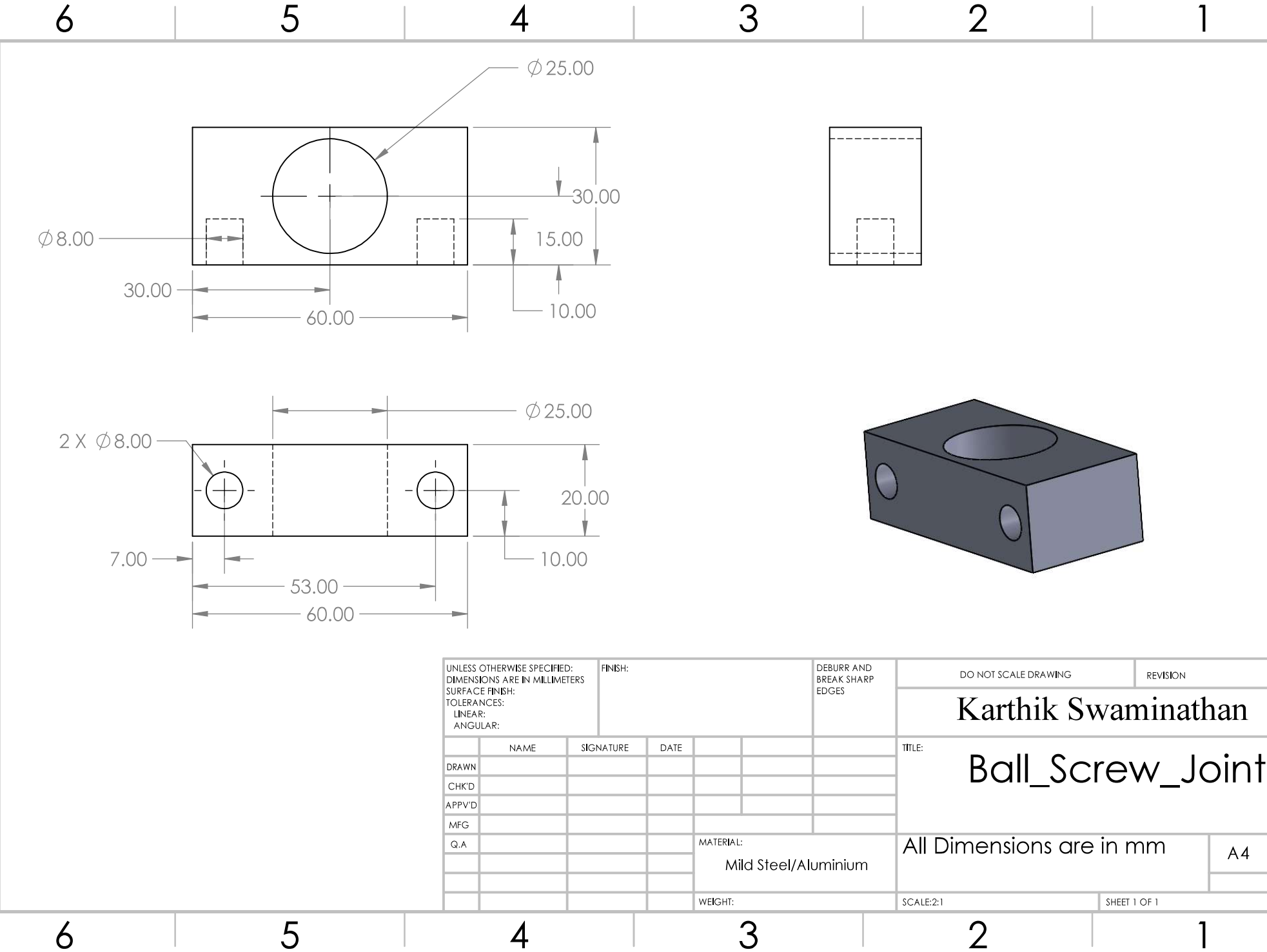


ITEM NO.	DESCRIPTION	Material	QTY.
1	Z_Column_Assem	Mild Steel	1
2	Motor_Extension_Z	Mild Steel	1
3	UHMW_pad_Y	UHMW	2
4	Z_Top_Plate	Mild Steel	1
5	M8x50 hex bolt	Mild Steel	4
6	M8 Nut	Mild Steel	4

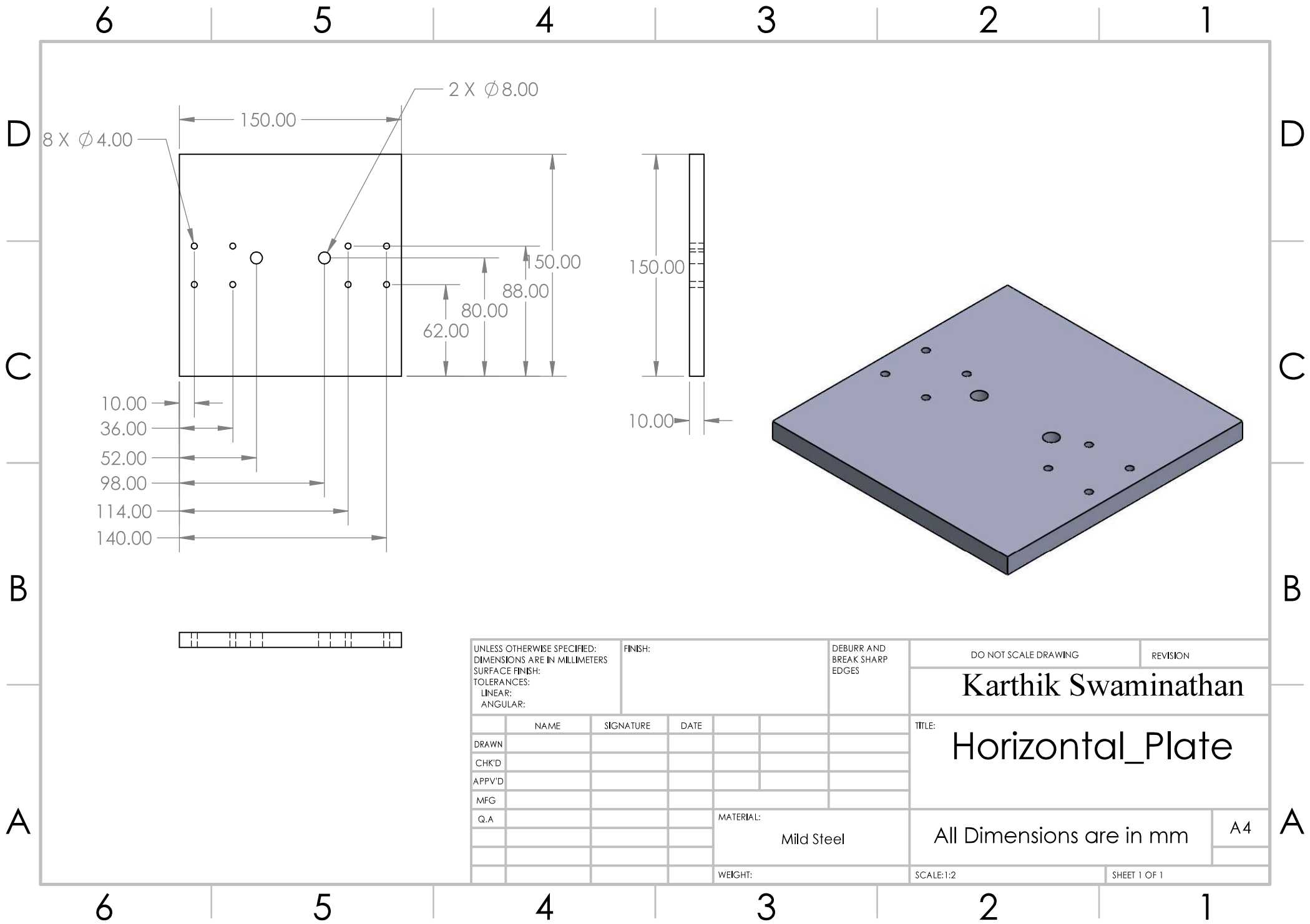
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING				REVISION			
								Karthik Swaminathan							
		NAME		SIGNATURE		DATE				TITLE: Z_Assembly		All Dimensions are in mm		A3	
DRAWN															
CHK'D															
APPV'D															
MFG															
Q.A															
						MATERIAL:		All Dimensions are in mm							
						WEIGHT:		SCALE:1:10				SHEET 1 OF 1			

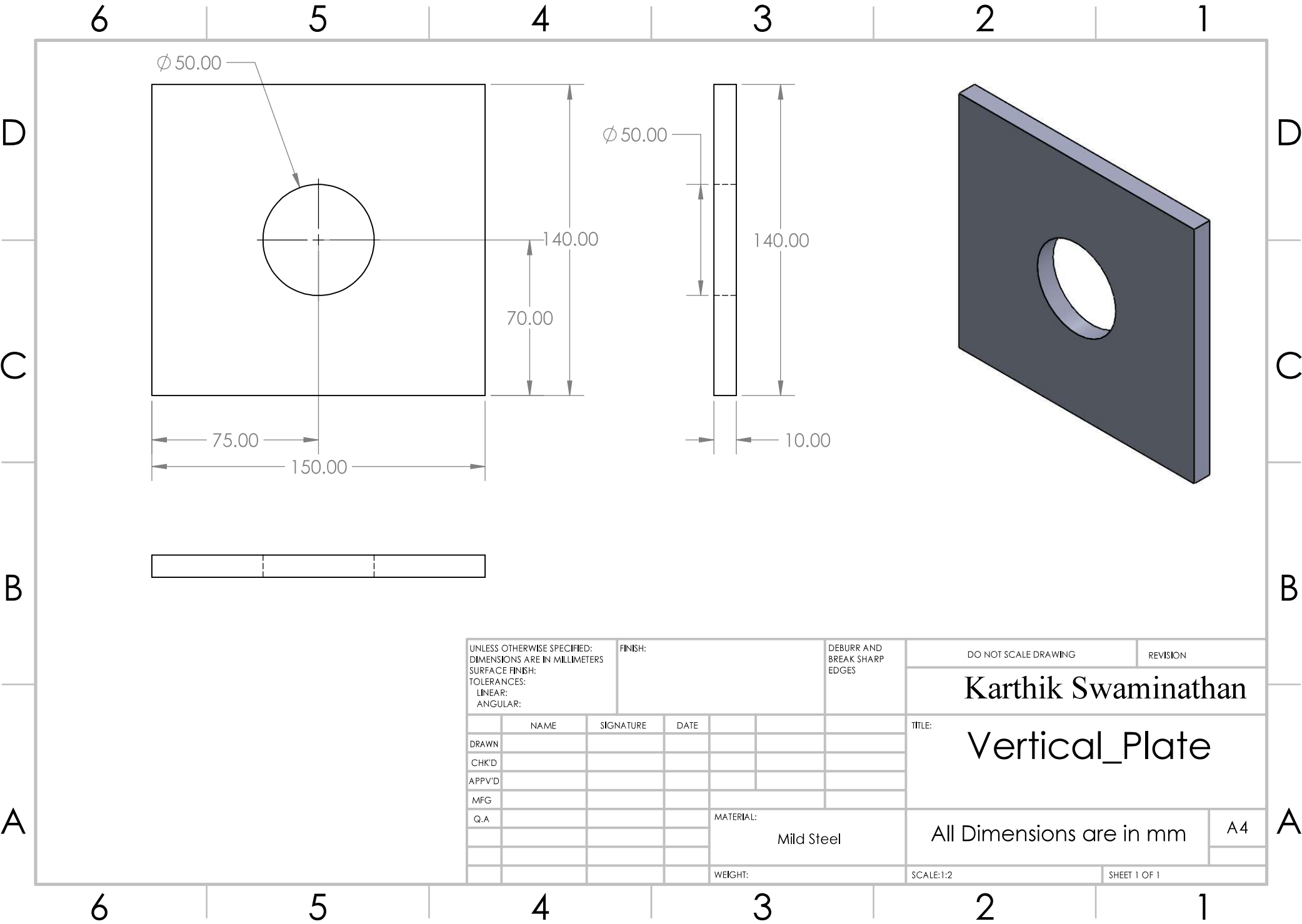


Dept.	Technical reference	Created by Karthik Swaminathan 17-06-2021	Approved by
		Document type	Document status
		Title Ball_Screw	DWG No.
		Rev.	Date of issue
		Sheet 1/1	

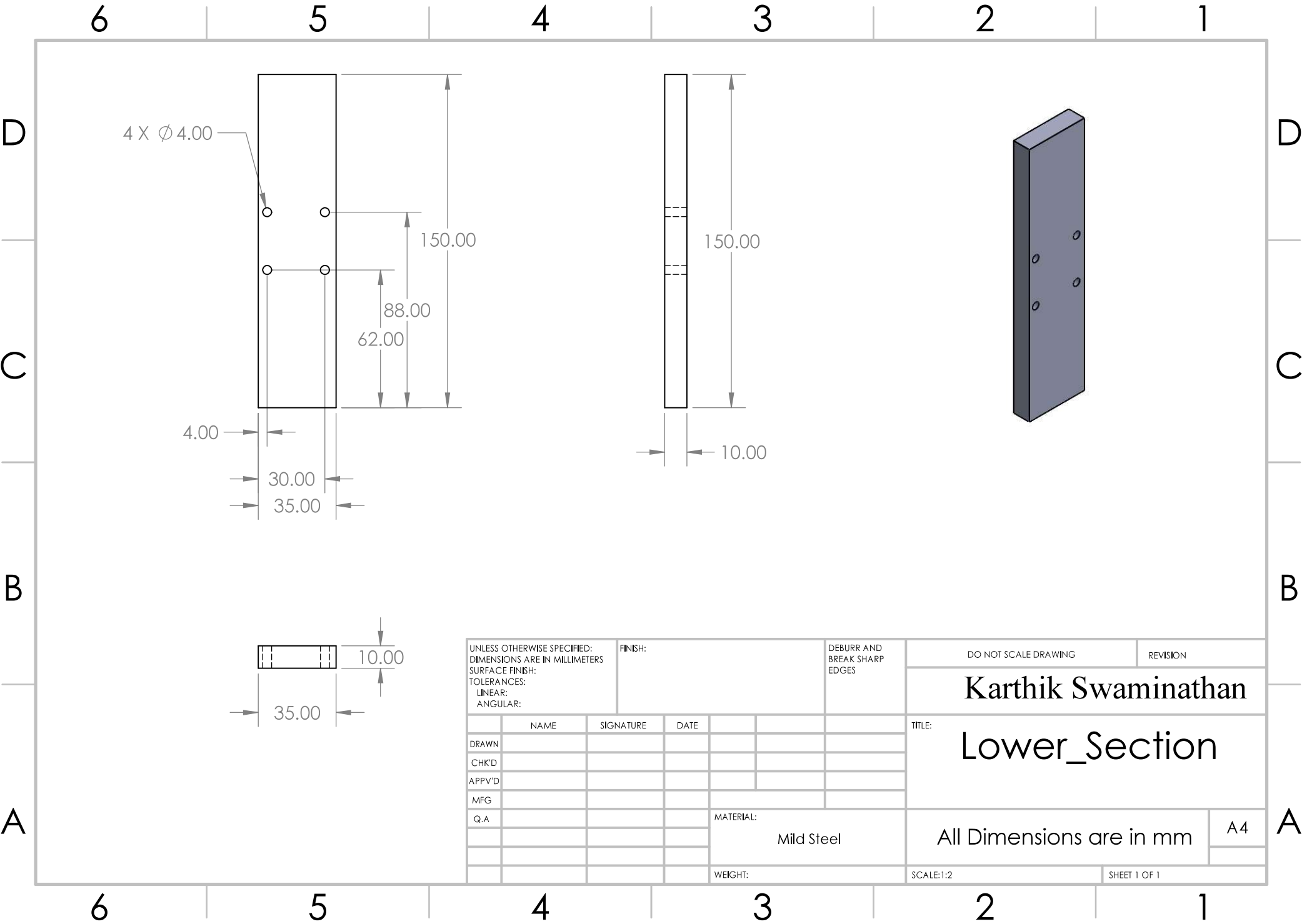


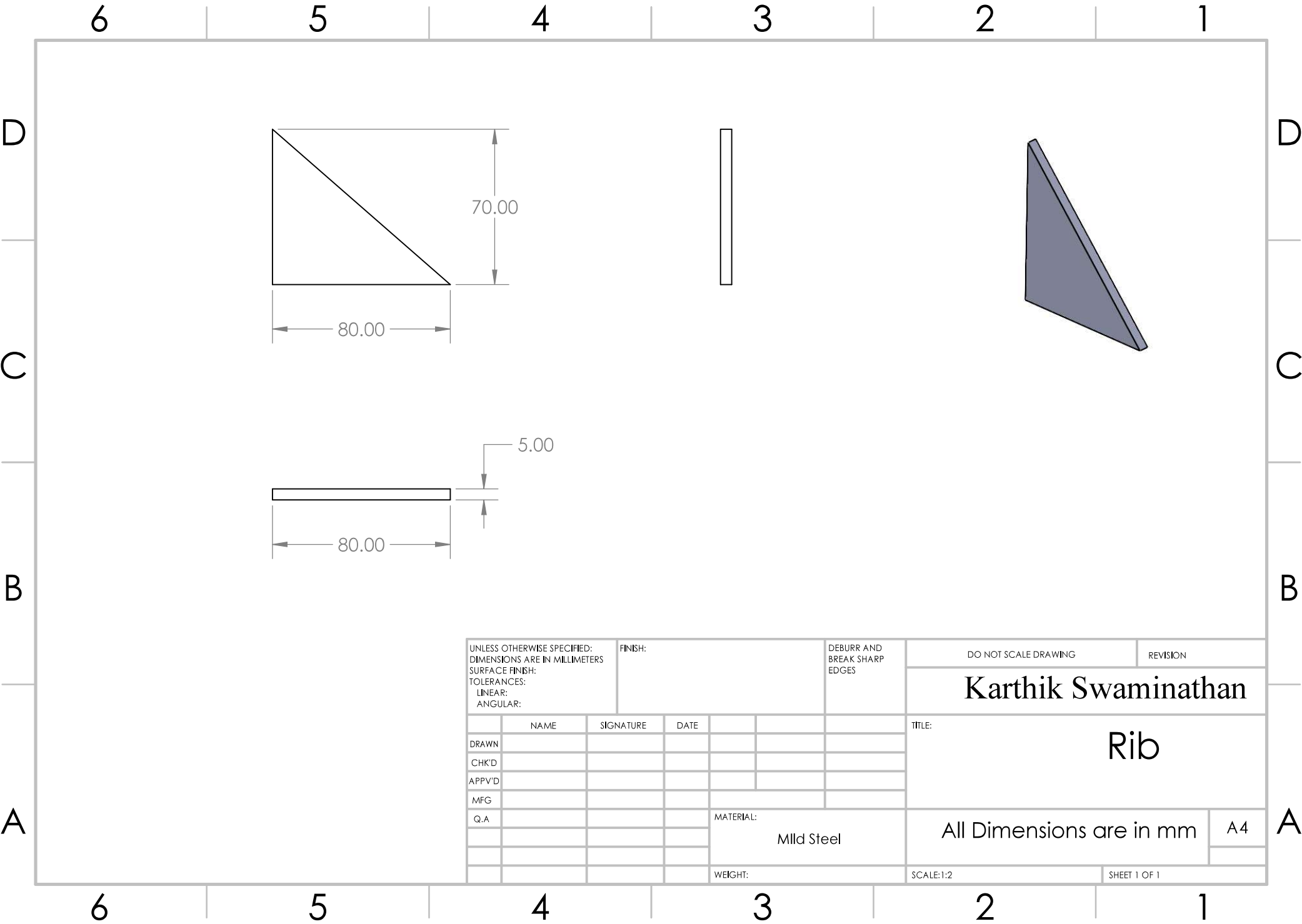
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION			
								Karthik Swaminathan					
		NAME		SIGNATURE		DATE				TITLE: Ball_Screw_Joint			
DRAWN													
CHK'D													
APPV'D													
MFG													
Q.A						MATERIAL: Mild Steel/Aluminium		All Dimensions are in mm				A4	
						WEIGHT:		SCALE:2:1				SHEET 1 OF 1	





UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION			
								Karthik Swaminathan					
DRAWN		NAME		SIGNATURE		DATE		TITLE: Vertical_Plate		All Dimensions are in mm		A4	
CHK'D													
APPV'D													
MFG													
Q.A													
								MATERIAL: Mild Steel					
								WEIGHT:		SCALE:1:2		SHEET 1 OF 1	





UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

FINISH:

DEBURR AND
BREAK SHARP
EDGES

DO NOT SCALE DRAWING

REVISION

Karthik Swaminathan

TITLE:

Rib

All Dimensions are in mm

A4

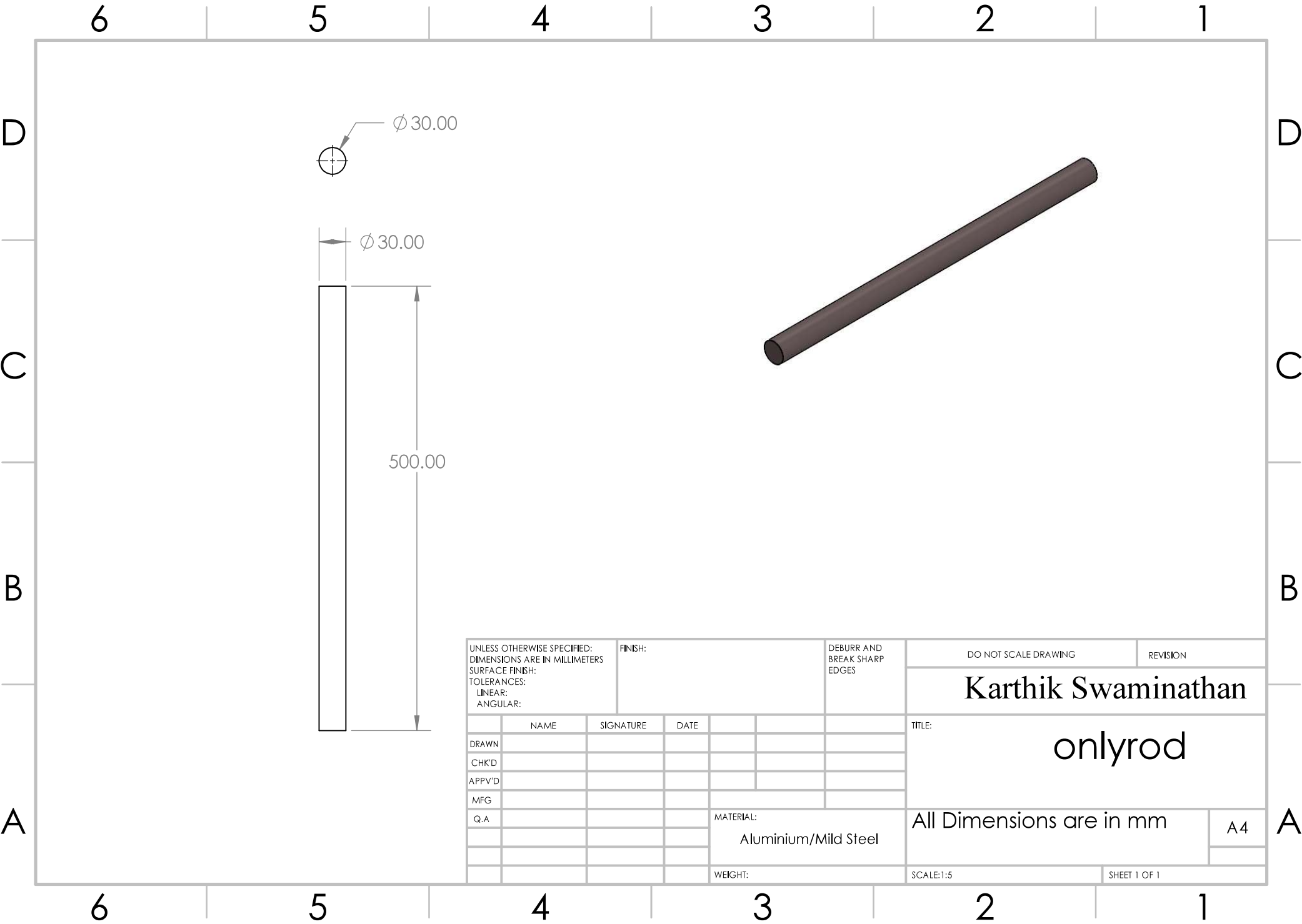
WEIGHT:

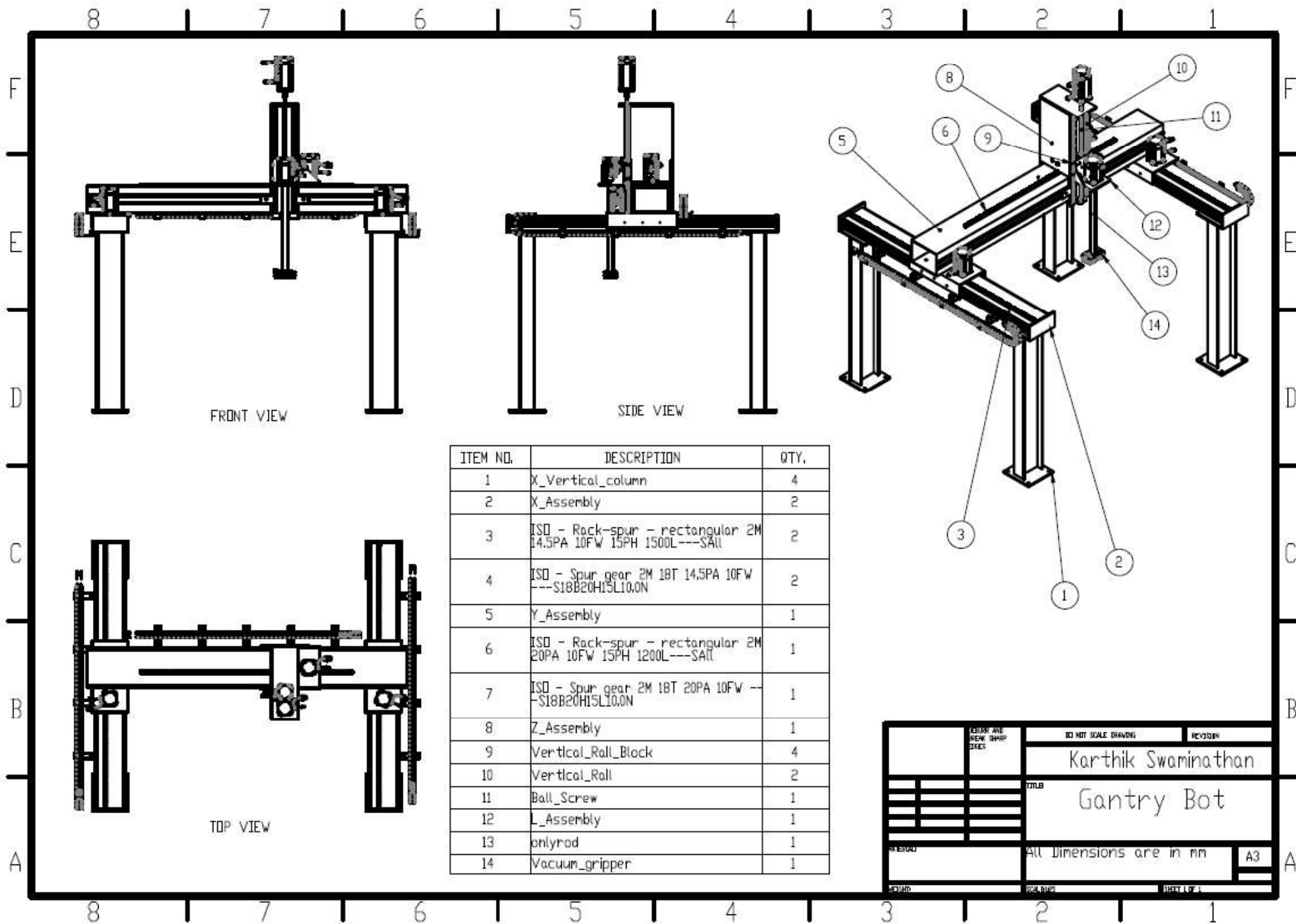
SCALE:1:2

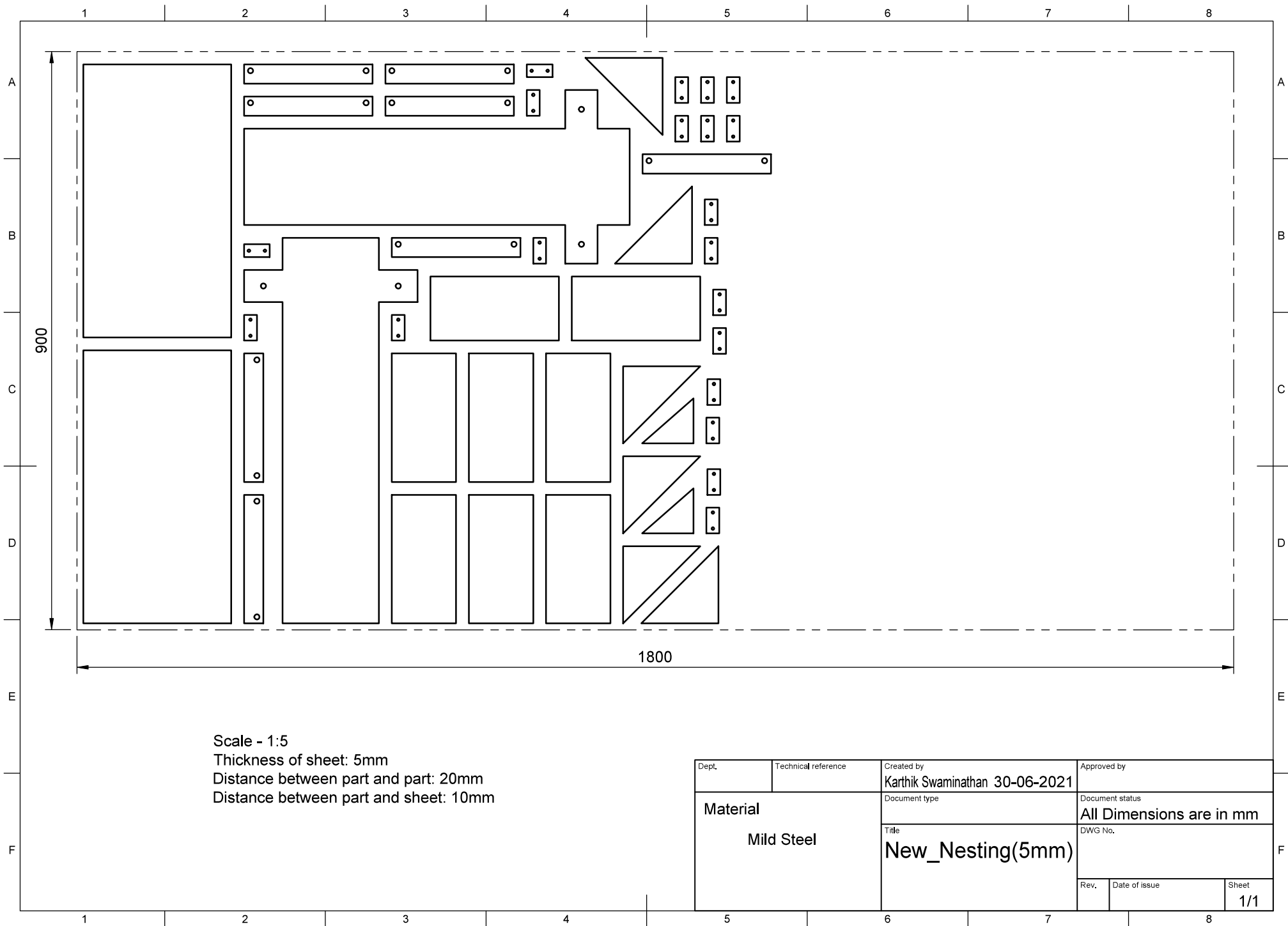
SHEET 1 OF 1

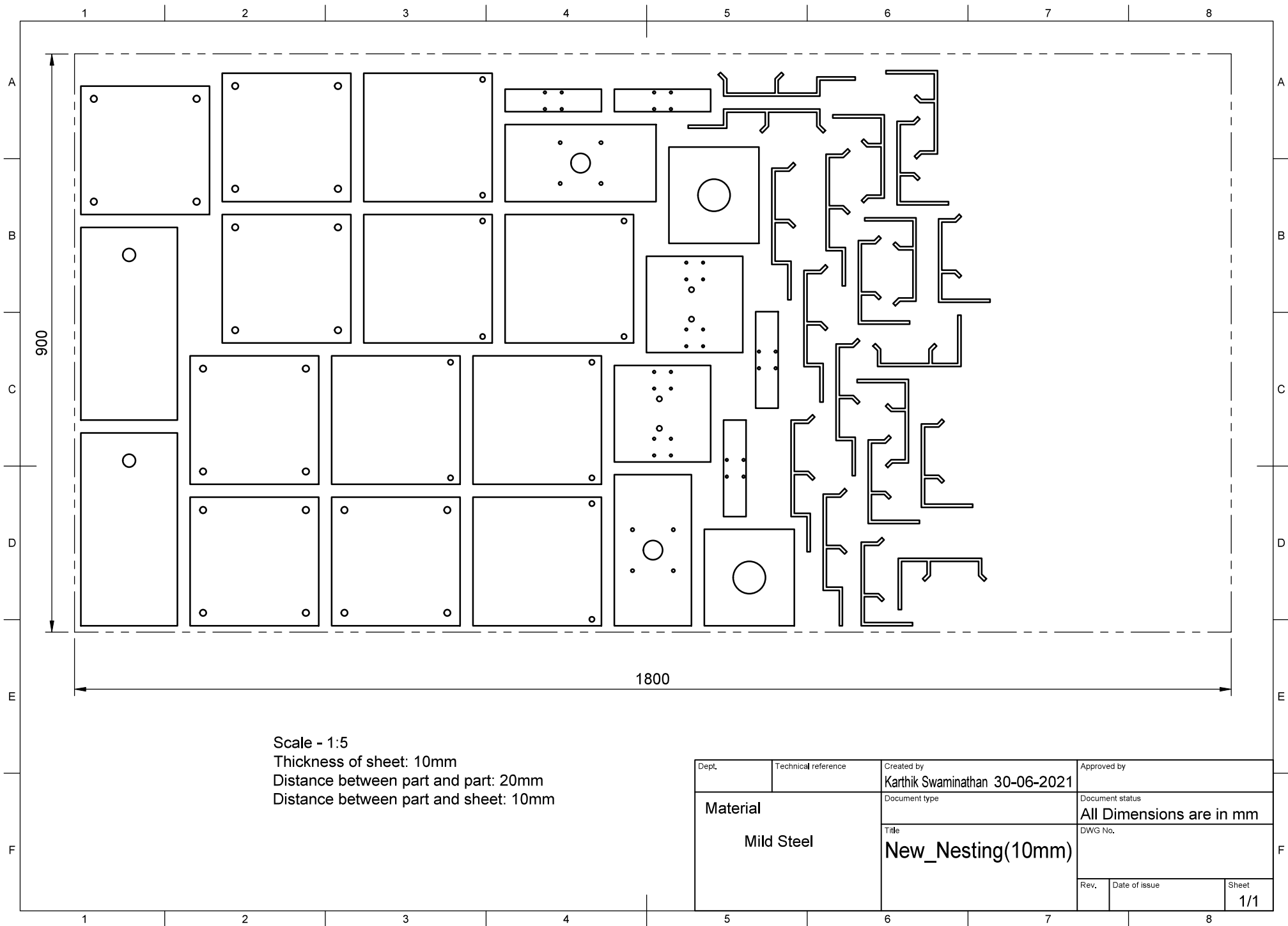
MATERIAL:

Mild Steel



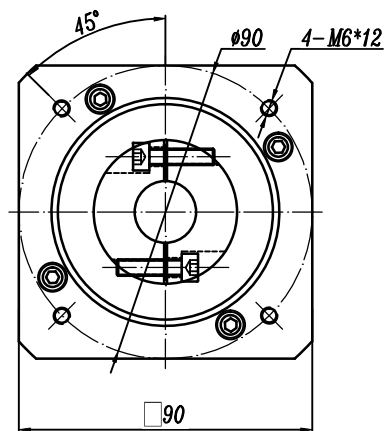




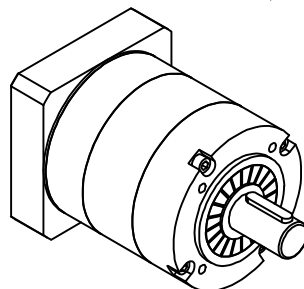
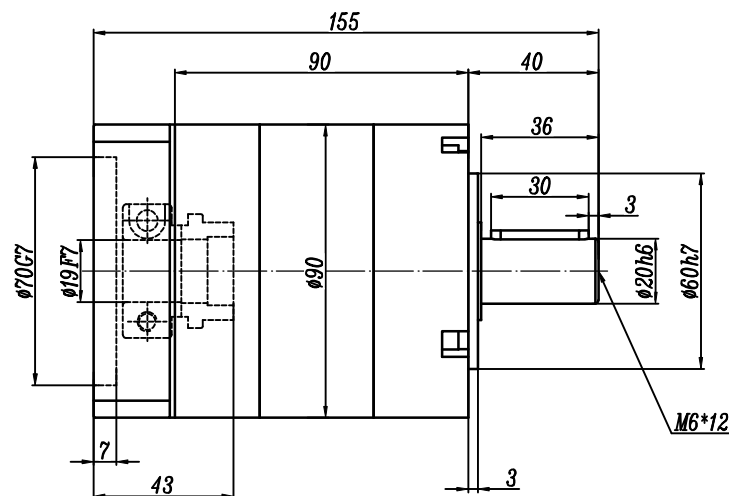
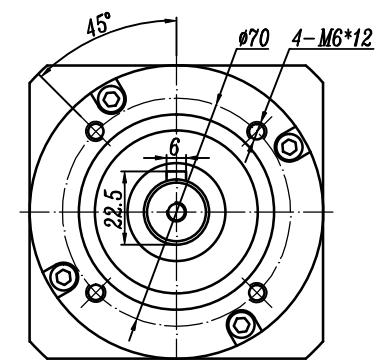


material: the flange is aluminium, the ring gear and output shaft is 42CrMo

input



output



Motor type/size: ECMA-C10807RS
 $\phi 19 \times 35 / \phi 70 \times 3 / 4 - \phi 6.6 - \phi 90$

Ratio	3	4	5	7	10
Rated output torque Nm	55	100	95	80	50
Max output torque Nm	110	200	190	160	100
Rotational inertia Kgcm ²	0.77	0.52	0.45	0.42	0.39

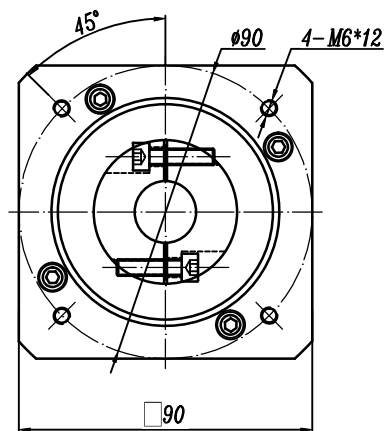
Technical data

Rated input speed	4000min ⁻¹	Noise dB	65		
Max input speed	6000min ⁻¹	Environment temperature	-20℃~90℃	Lubricating system	Long-term
Maximum radial load	550N	Average useful life	20000hours	Levels of protection	IP65
Maximum axial load	500N	Full load efficiency	96%	Flange accuracy	DIN42955-B
Backlash(arcmin)	10~12	Installation	arbitrarily	Weight(Kg)	3.1

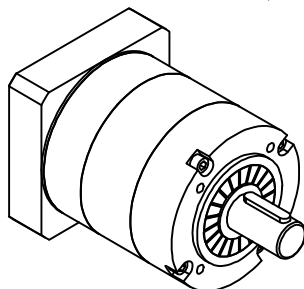
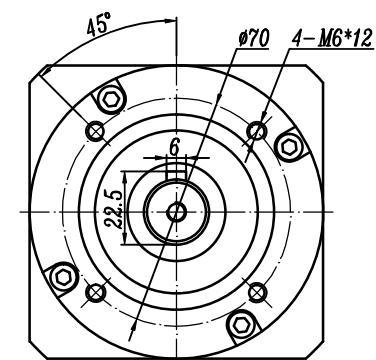
						PL90-05-C108			Design for Delta India	

material: the flange is aluminium, the ring gear and output shaft is 42CrMo

input



output



Motor type/size: ECMA-C10807RS

Ø19*35/Ø70*3/4-Ø6.6-Ø90

<i>Ratio</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>7</i>	<i>10</i>	
<i>Rated output torque</i> Nm	<i>55</i>	<i>100</i>	<i>95</i>	<i>80</i>	<i>50</i>	
<i>Max output torque</i> Nm	<i>110</i>	<i>200</i>	<i>190</i>	<i>160</i>	<i>100</i>	
<i>Rotational inertia</i> Kgcm ²	<i>0.77</i>	<i>0.52</i>	<i>0.45</i>	<i>0.42</i>	<i>0.39</i>	

Technical data

Rated input speed	4000min ⁻¹	Noise dB	65		
Max input speed	6000min ⁻¹	Environment temperature	-20℃~90℃	Lubricating system	Long-term
Maximum radial load	550N	Average useful life	20000hours	Levels of protection	IP65
Maximum axial load	500N	Full load efficiency	96%	Flange accuracy	DIN42955-B
Backlash(arcmin)	10~12	Installation	arbitrarily	Weight(Kg)	3.1

						PL90-10-C108	Design for Delta India
							