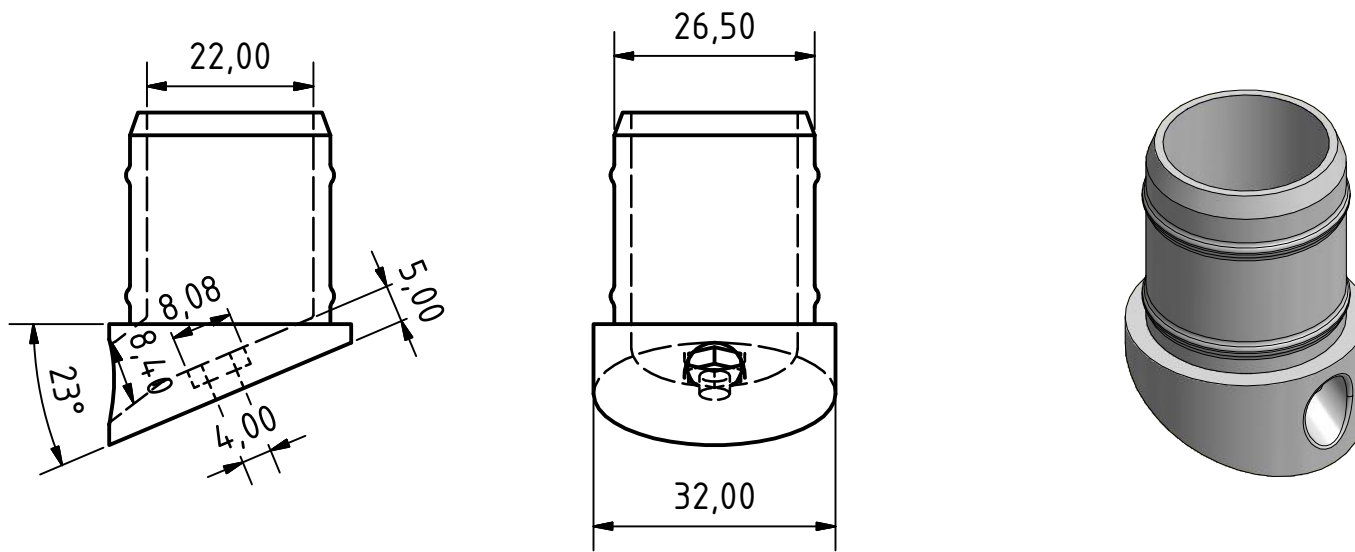
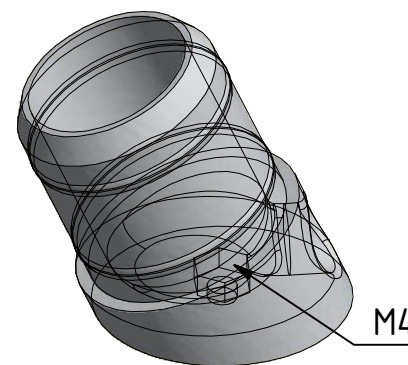
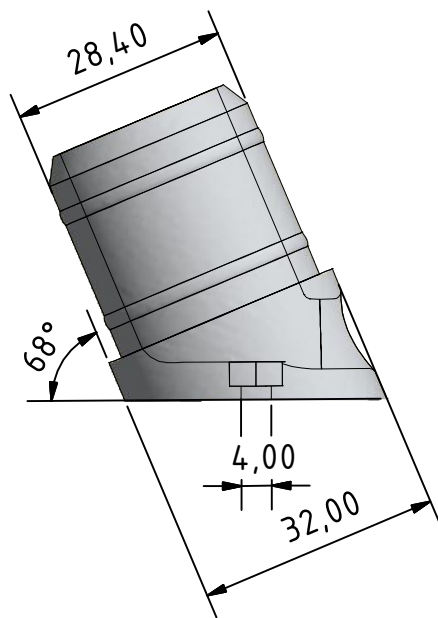
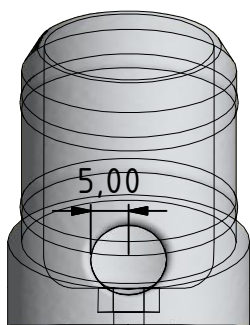


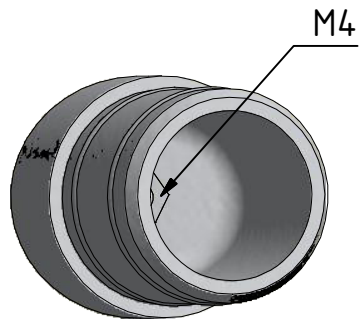
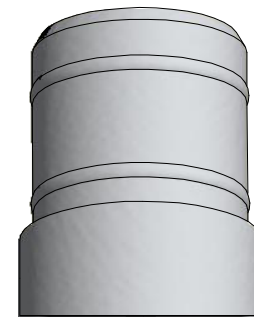
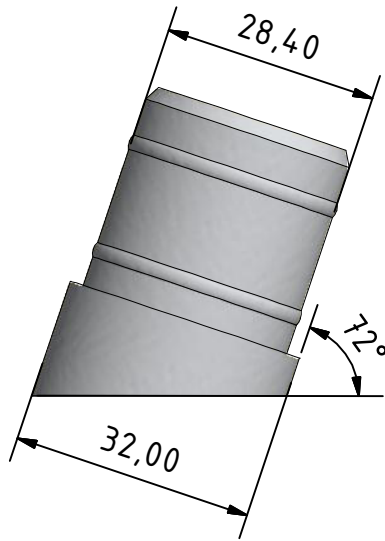
01-pvc-pipe_support_a



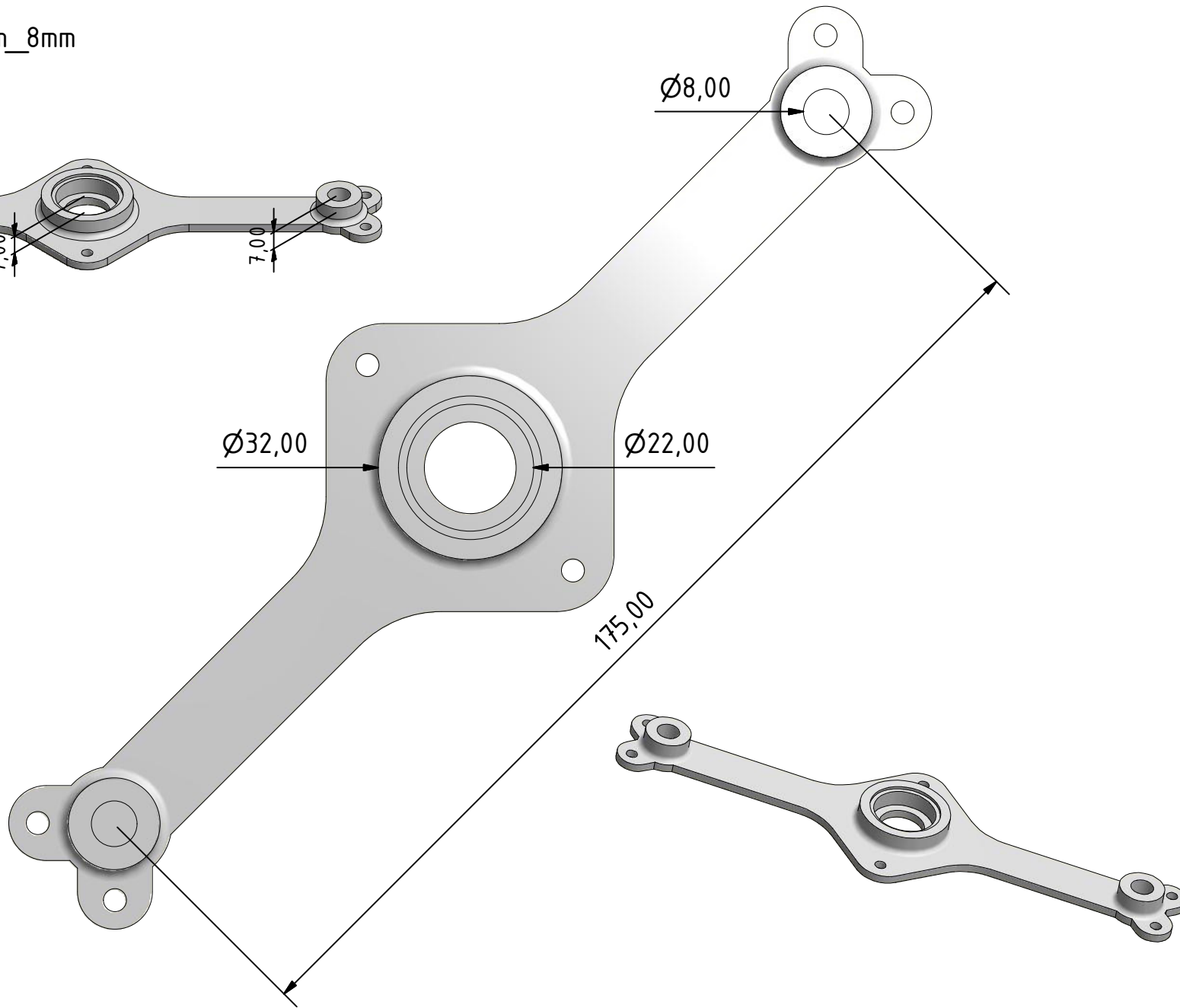
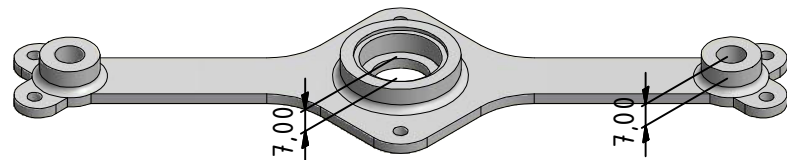
01-pvc_pipe_support_a



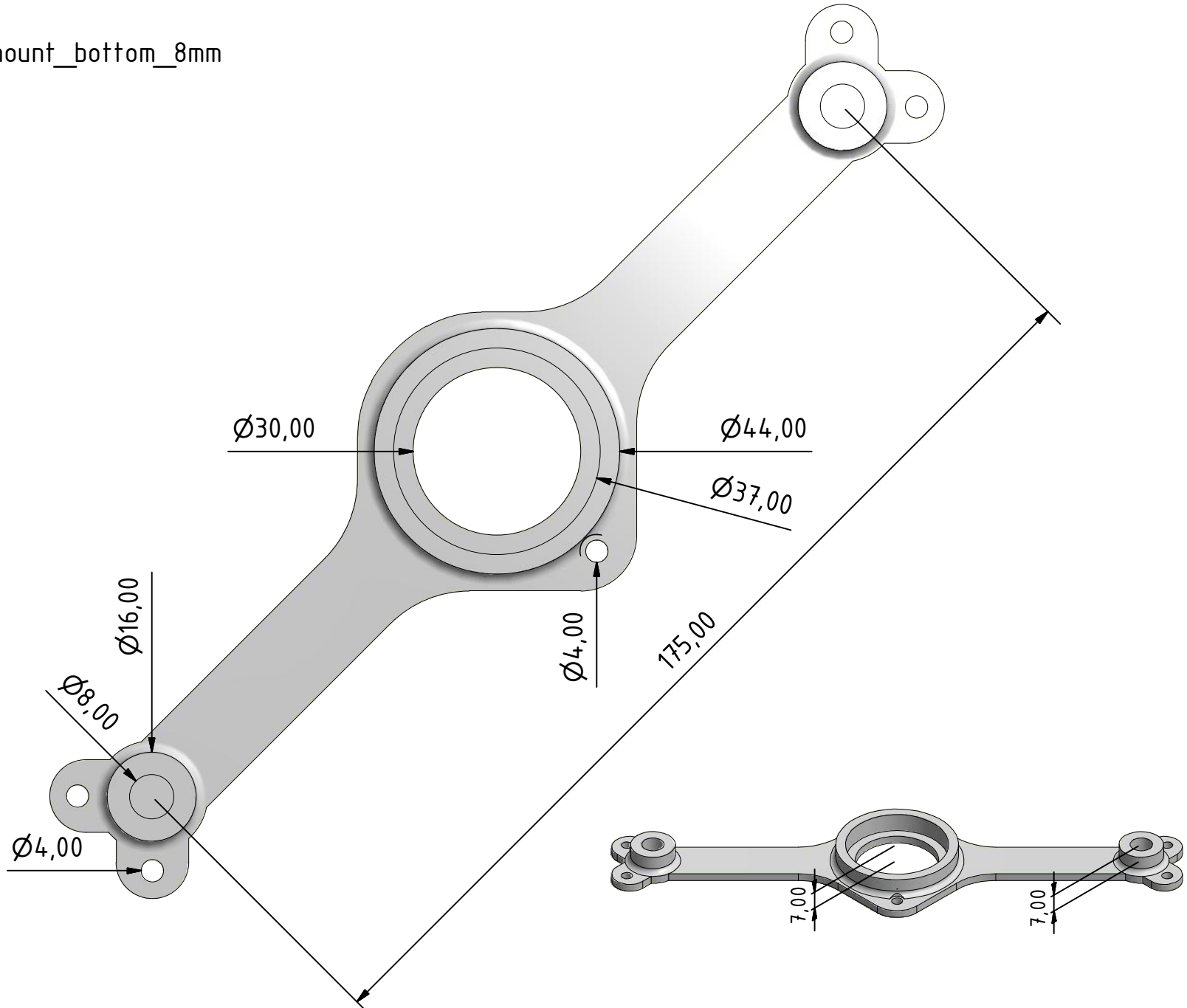
02-pvc_pipe_support_b



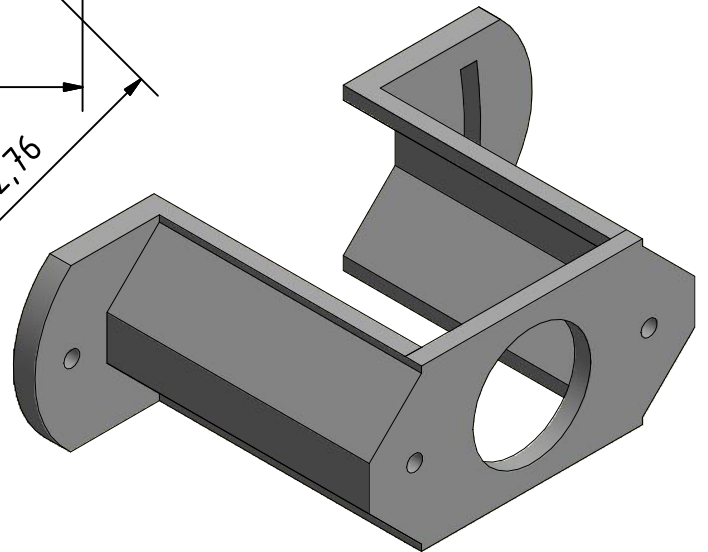
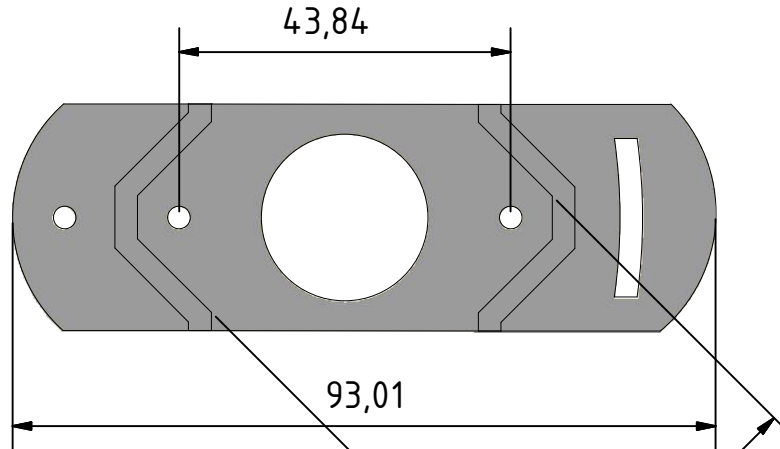
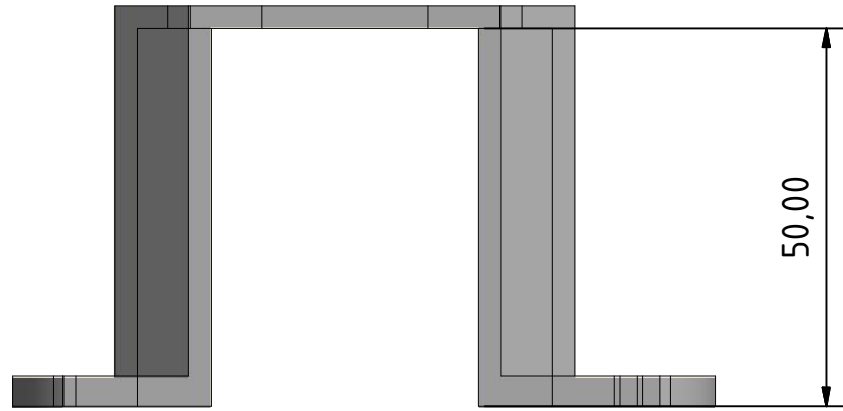
03-z_mount_bottom_8mm



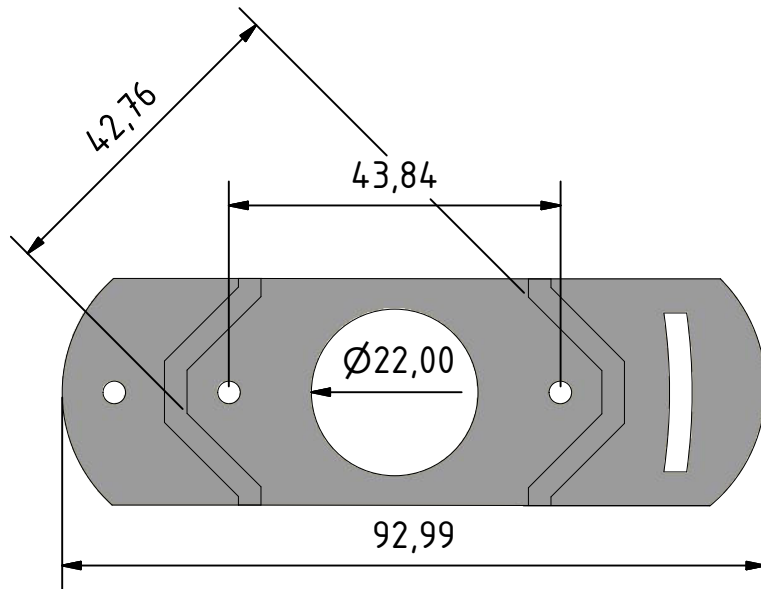
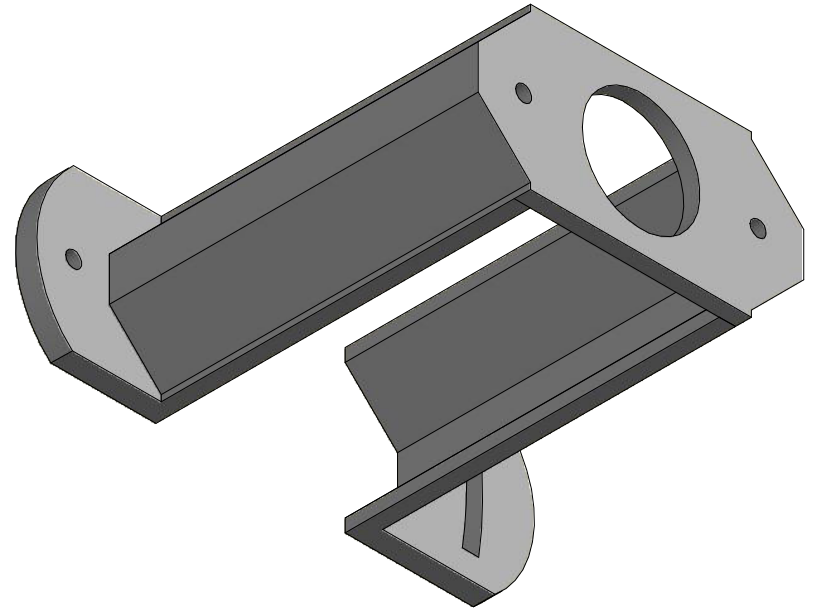
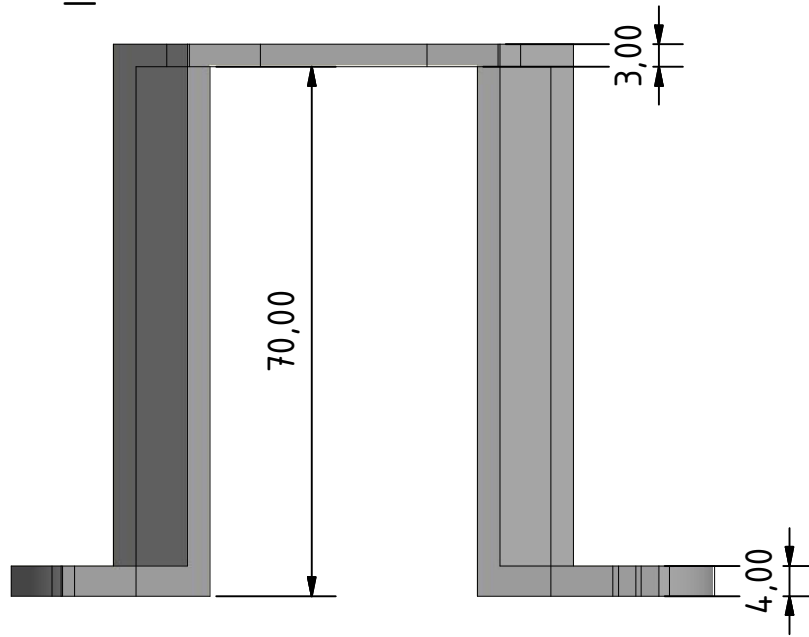
04-z_mount_bottom_8mm



05-motormount_short



06-motormount_fall



07-drivewheel_rod

Ø154,00

Ø30,00

7,50

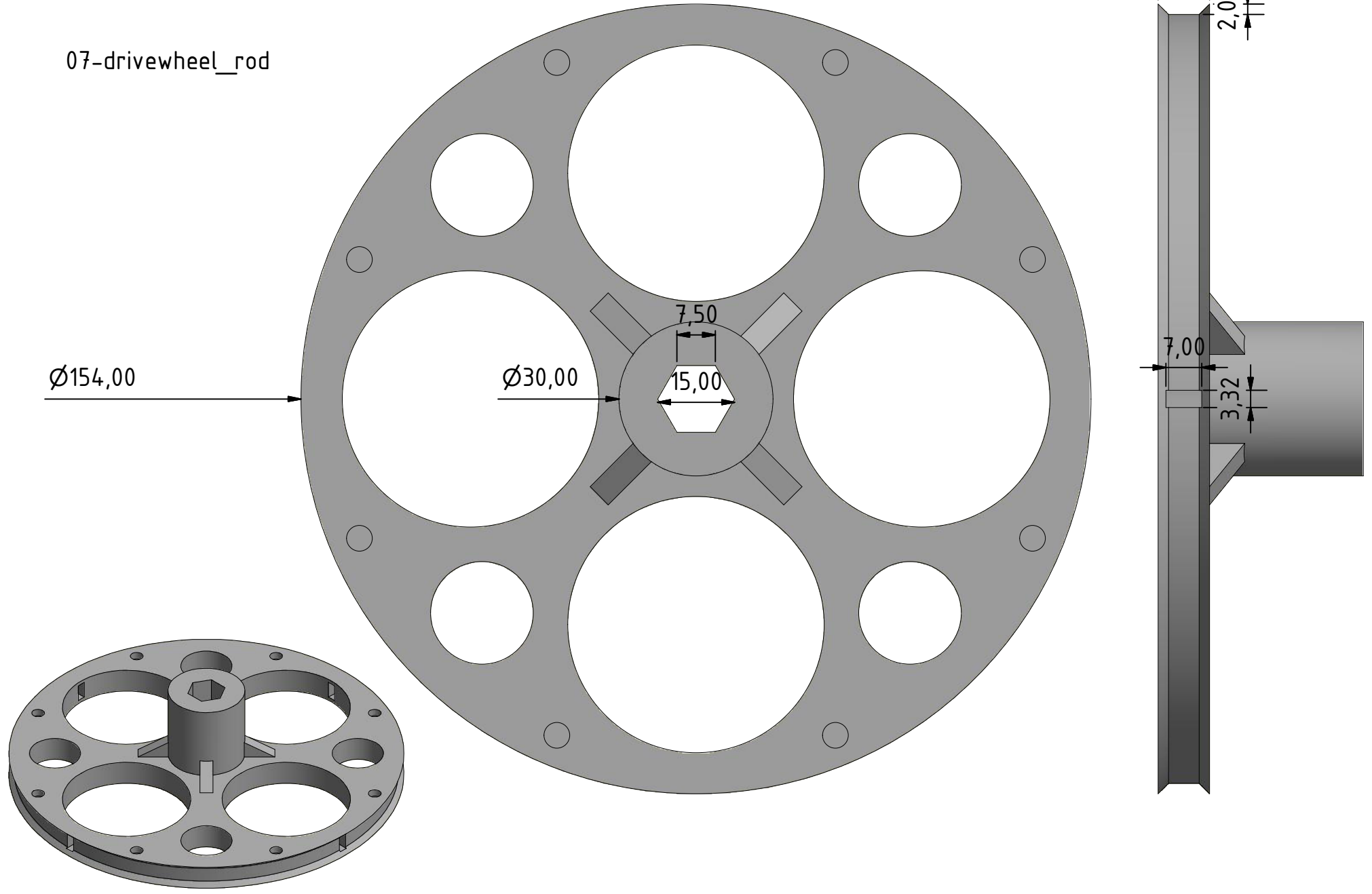
15,00

10,00

2,02

7,00

3,32



08-drivewheel_tube

$\varnothing 154,00$

$\varnothing 30,00$

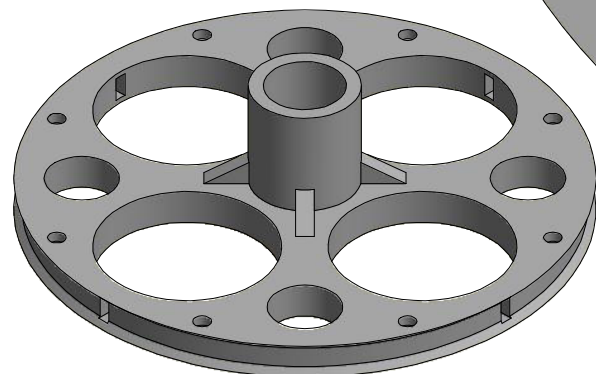
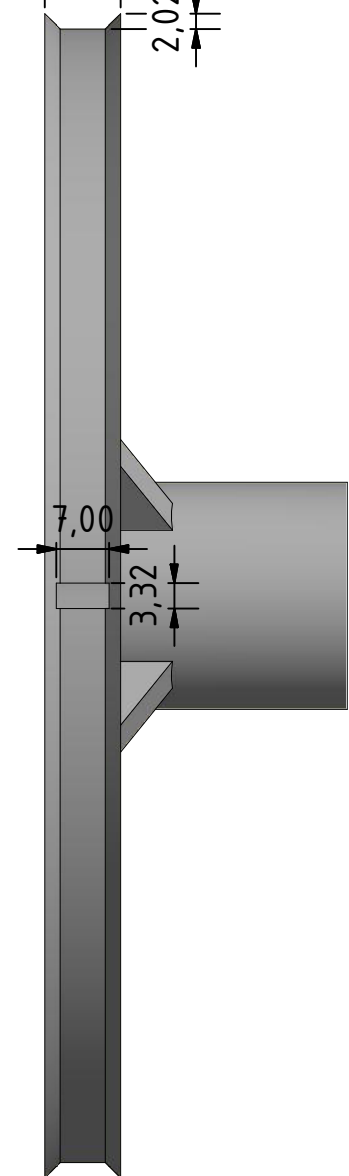
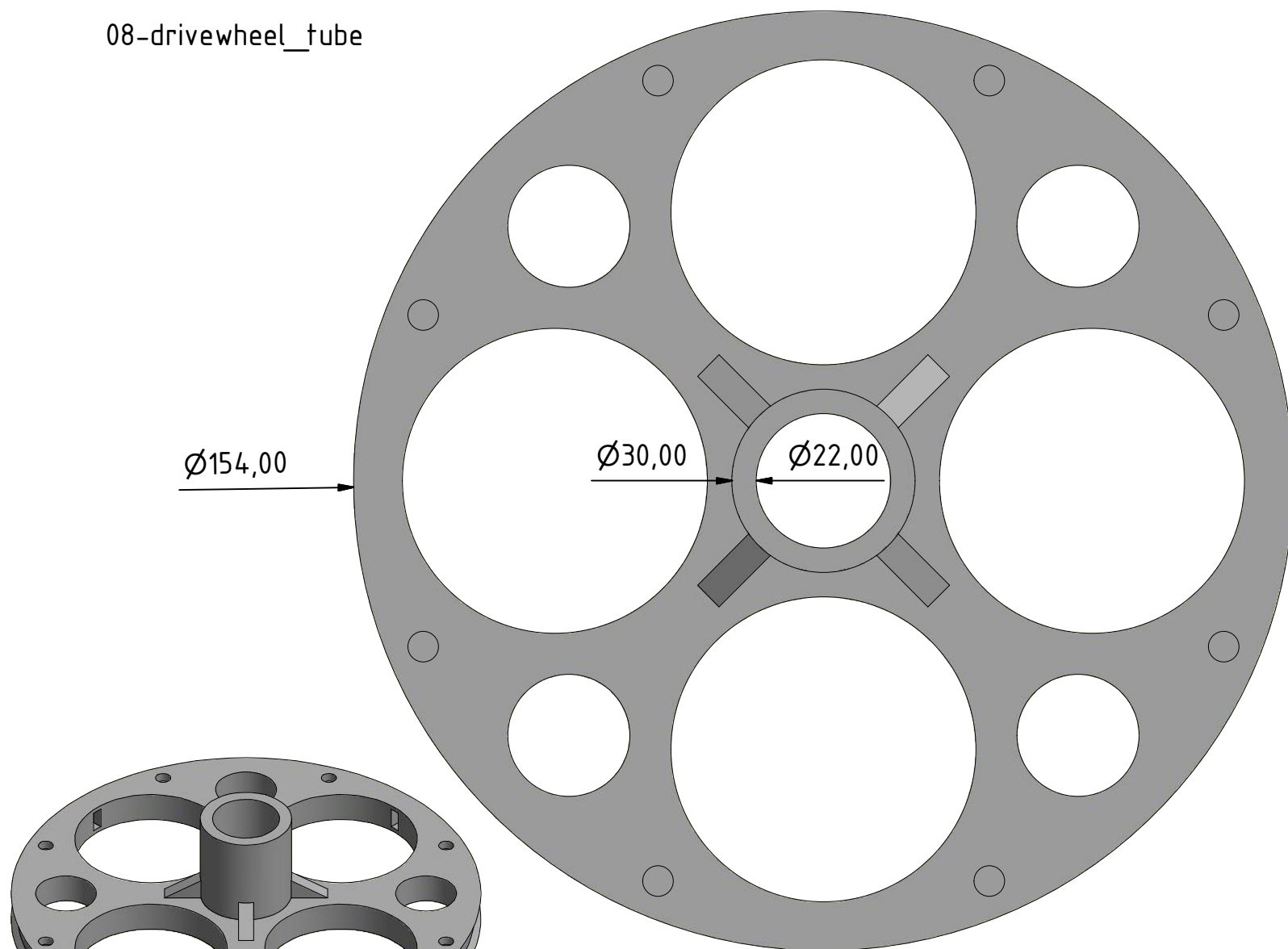
$\varnothing 22,00$

10,00

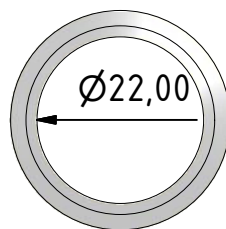
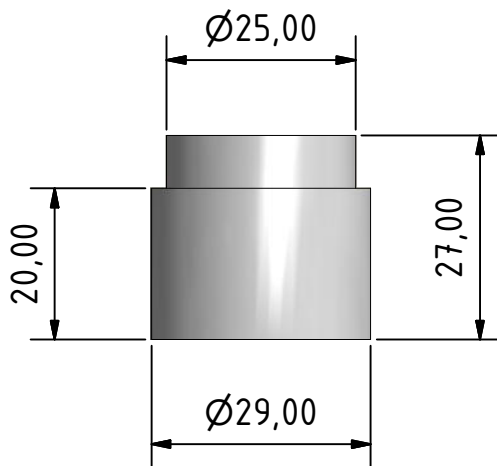
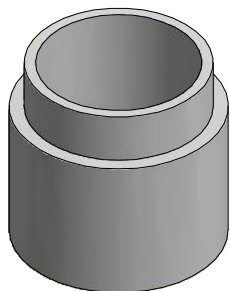
2,02

7,00

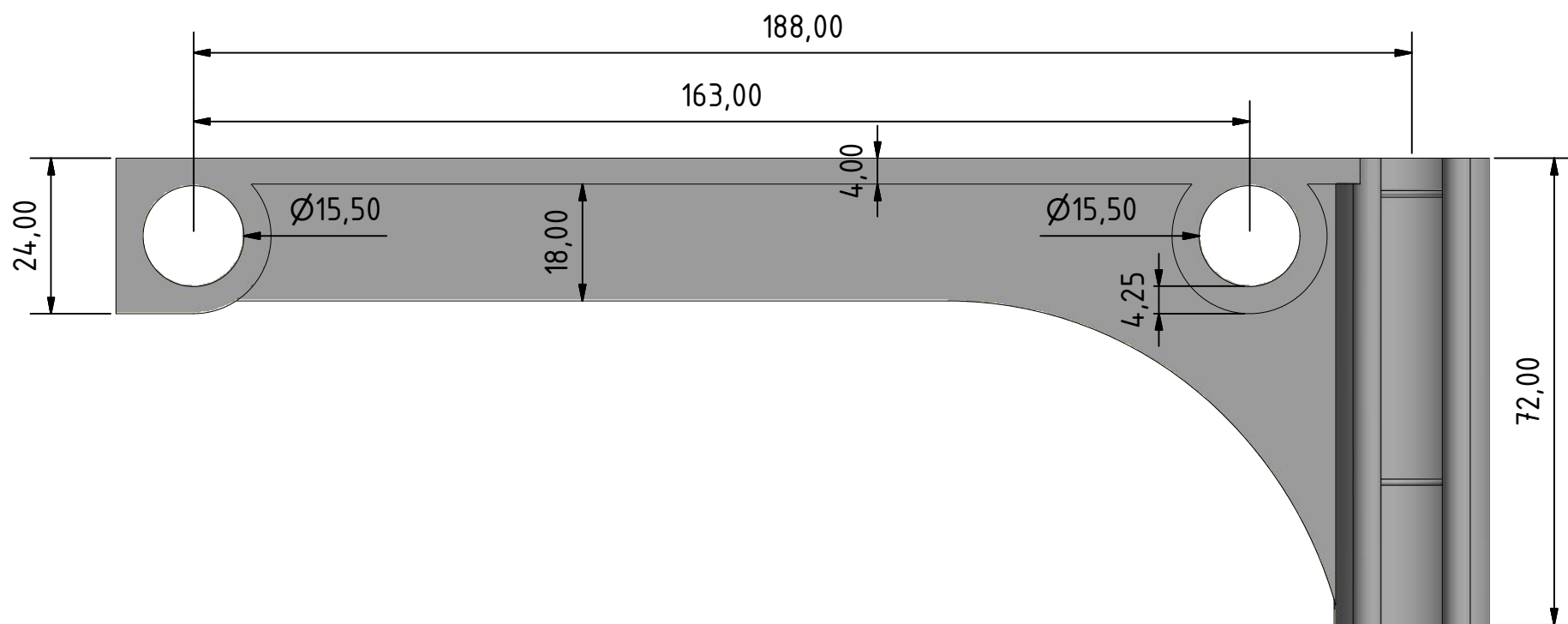
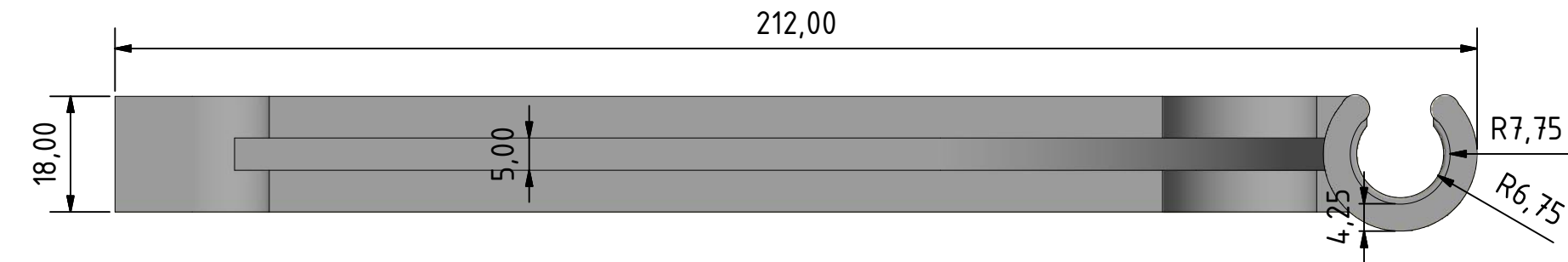
3,32



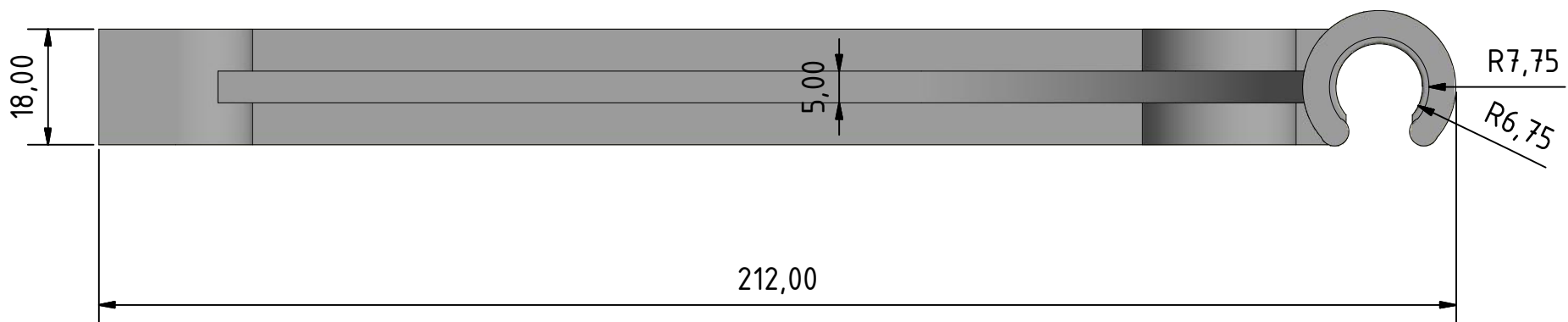
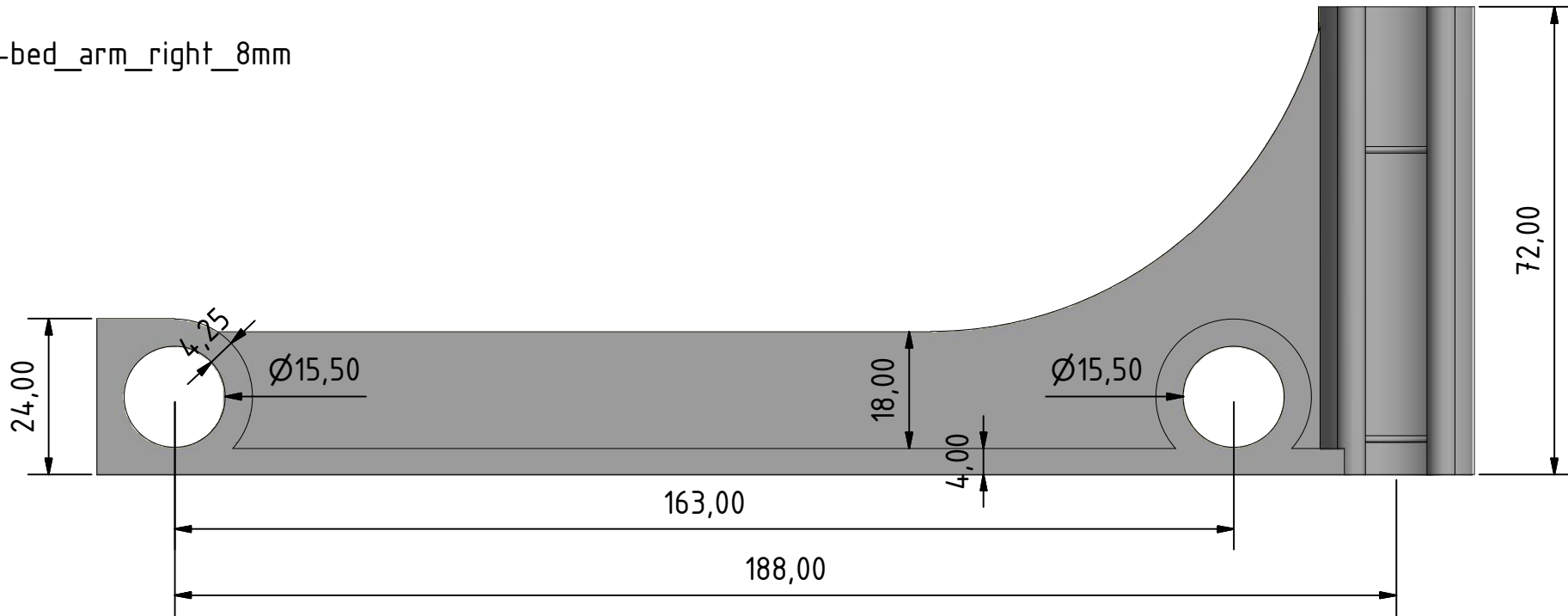
09-22mm_6805_bearing_adaptor



10-bed_arm_left_8mm

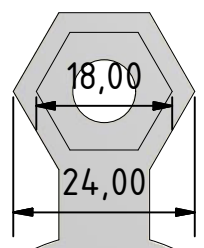


11-bed_arm_right_8mm



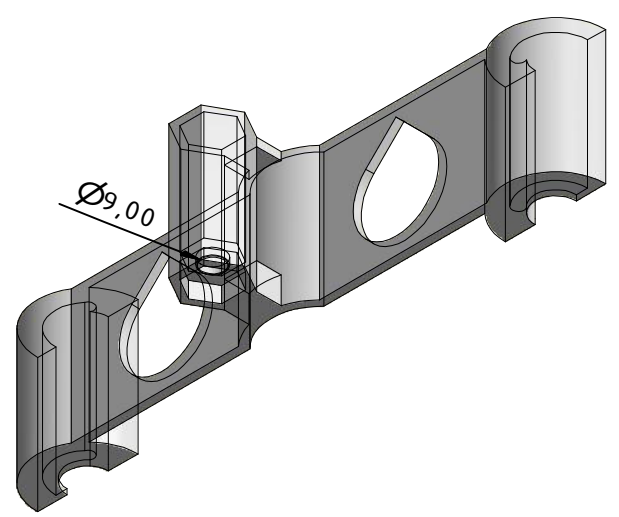
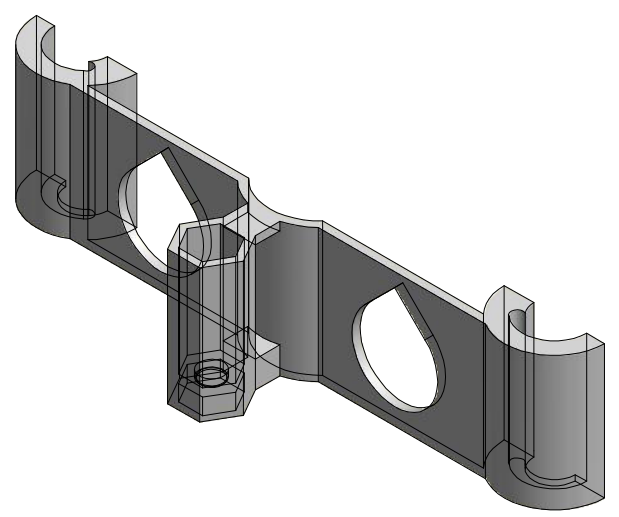
12-bed_z_mount_bracket

$\varnothing 15,49$

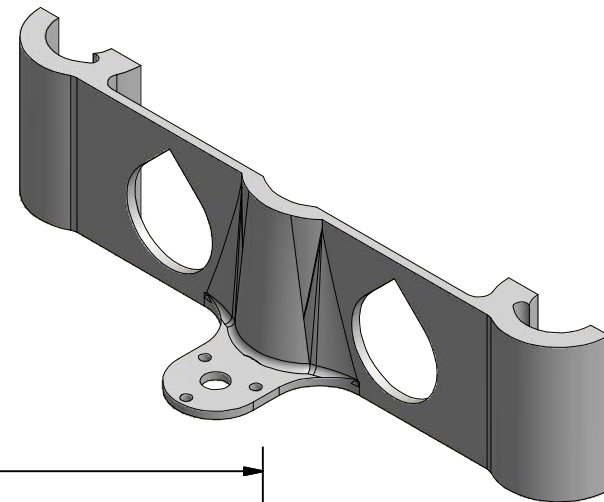


175,00
212,50

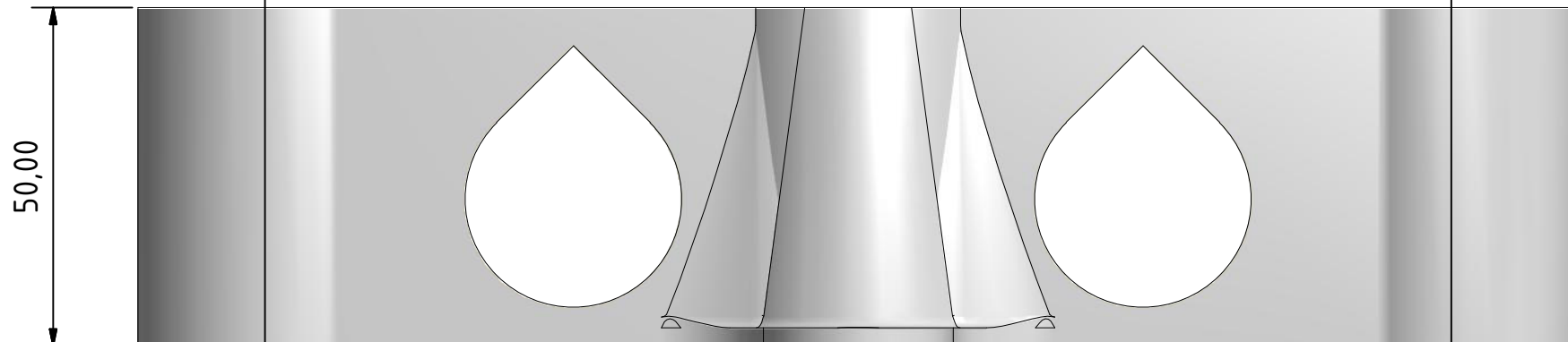
50,00



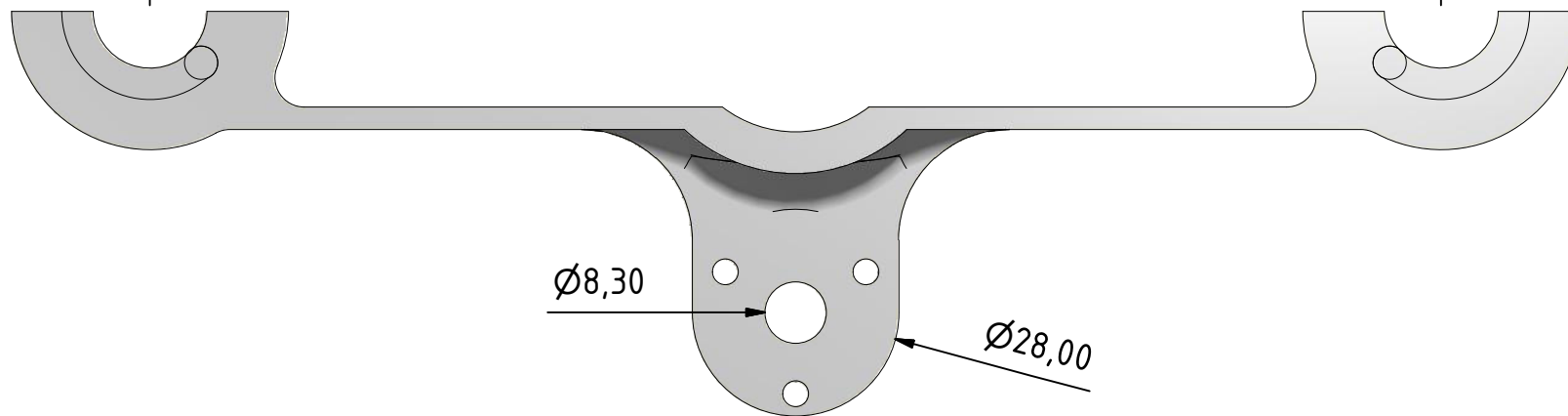
12-bed_z_mount_bracket for threadless ball screw 8mm



175,00



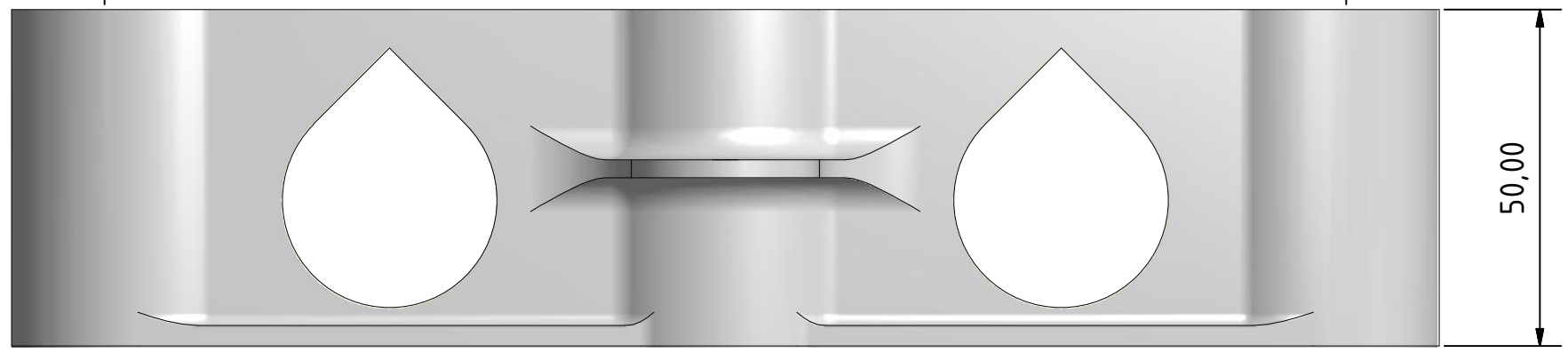
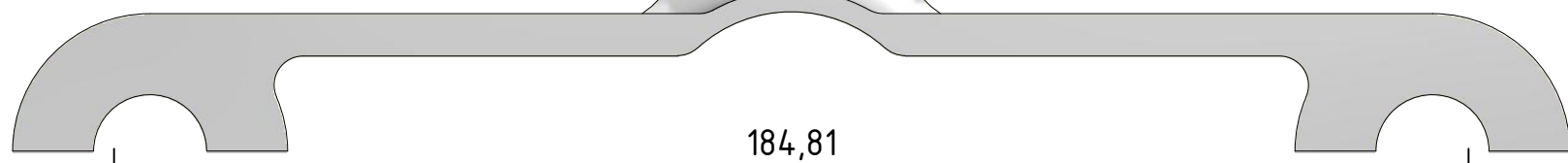
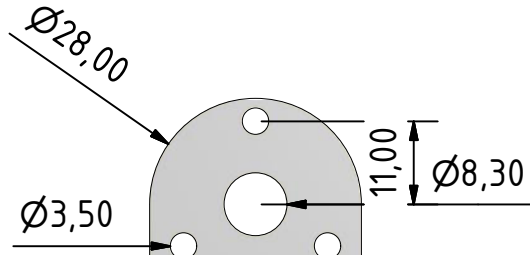
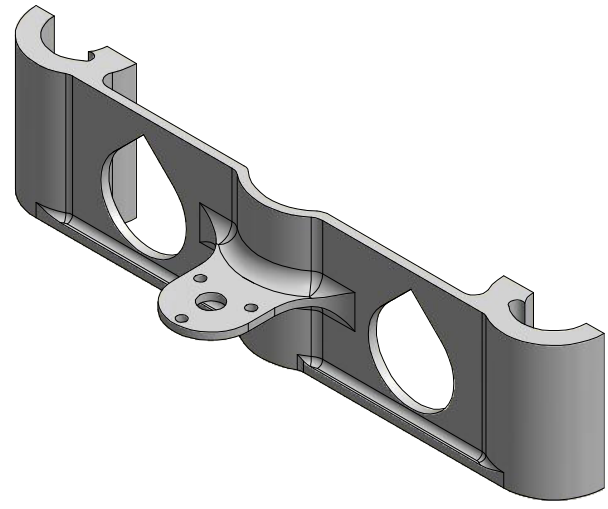
50,00



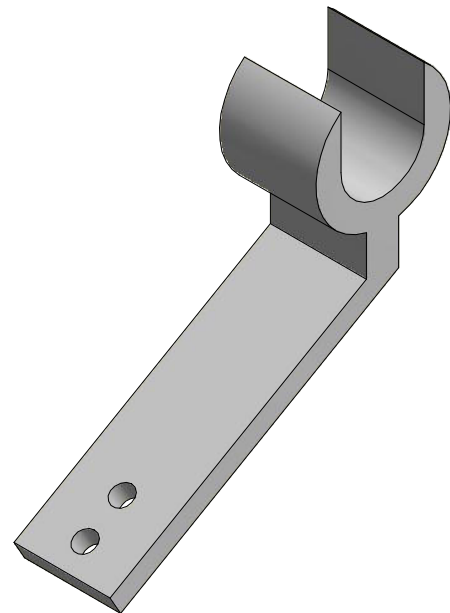
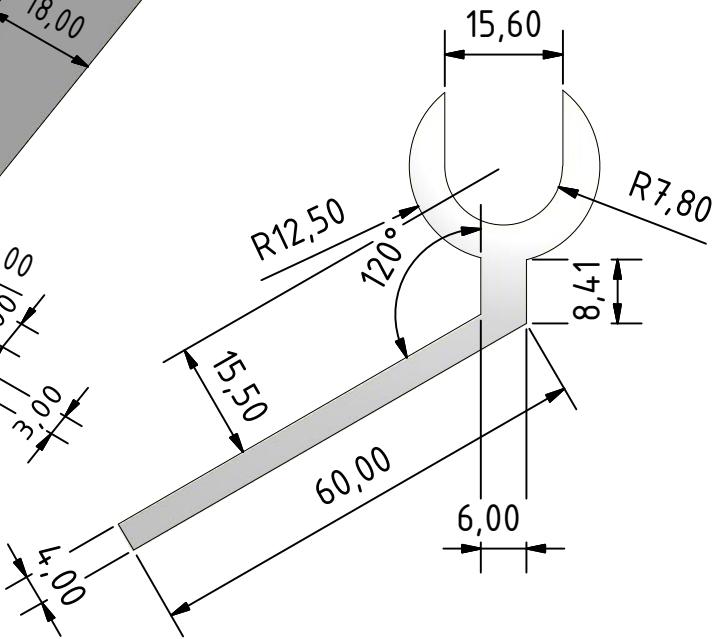
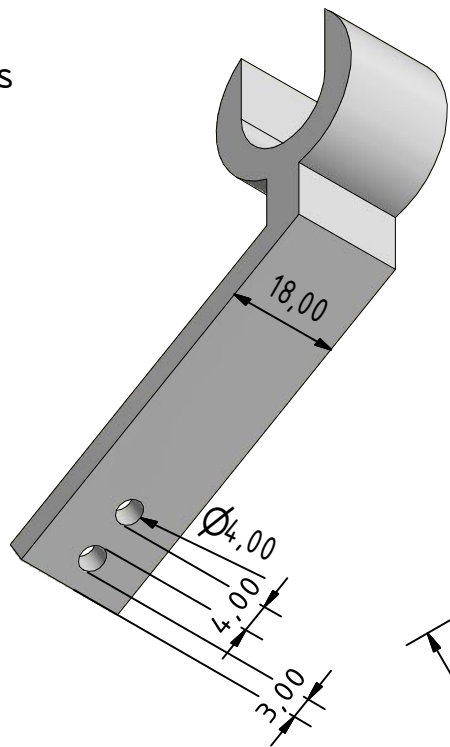
$\text{Ø}8,30$

$\text{Ø}28,00$

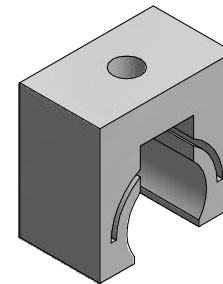
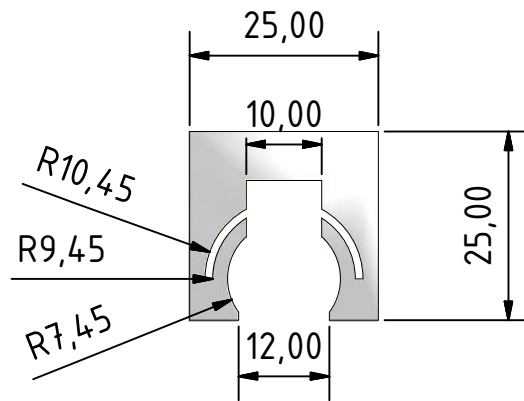
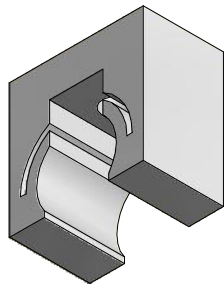
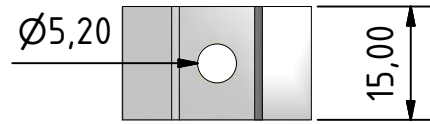
12-bed_z_mount_bracket for threadless ball screw 8mm_ver2



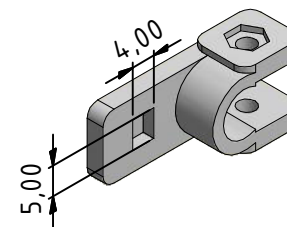
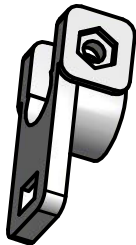
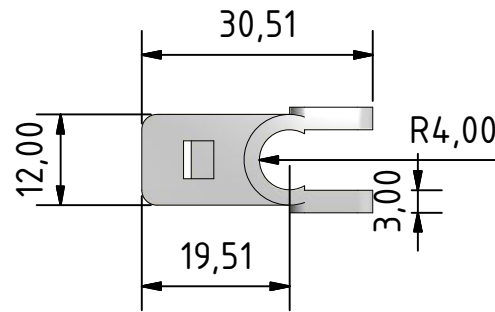
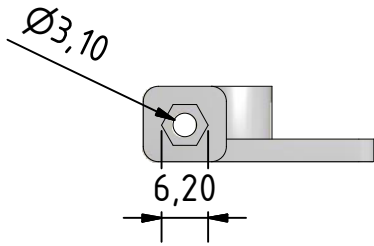
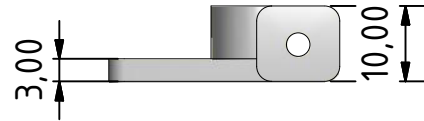
13-bed_rear_mountclips



14-bed_front_mountclips



15-hall_endstop_holder



15mm steel pipe 440mm

$\varnothing 15,00$

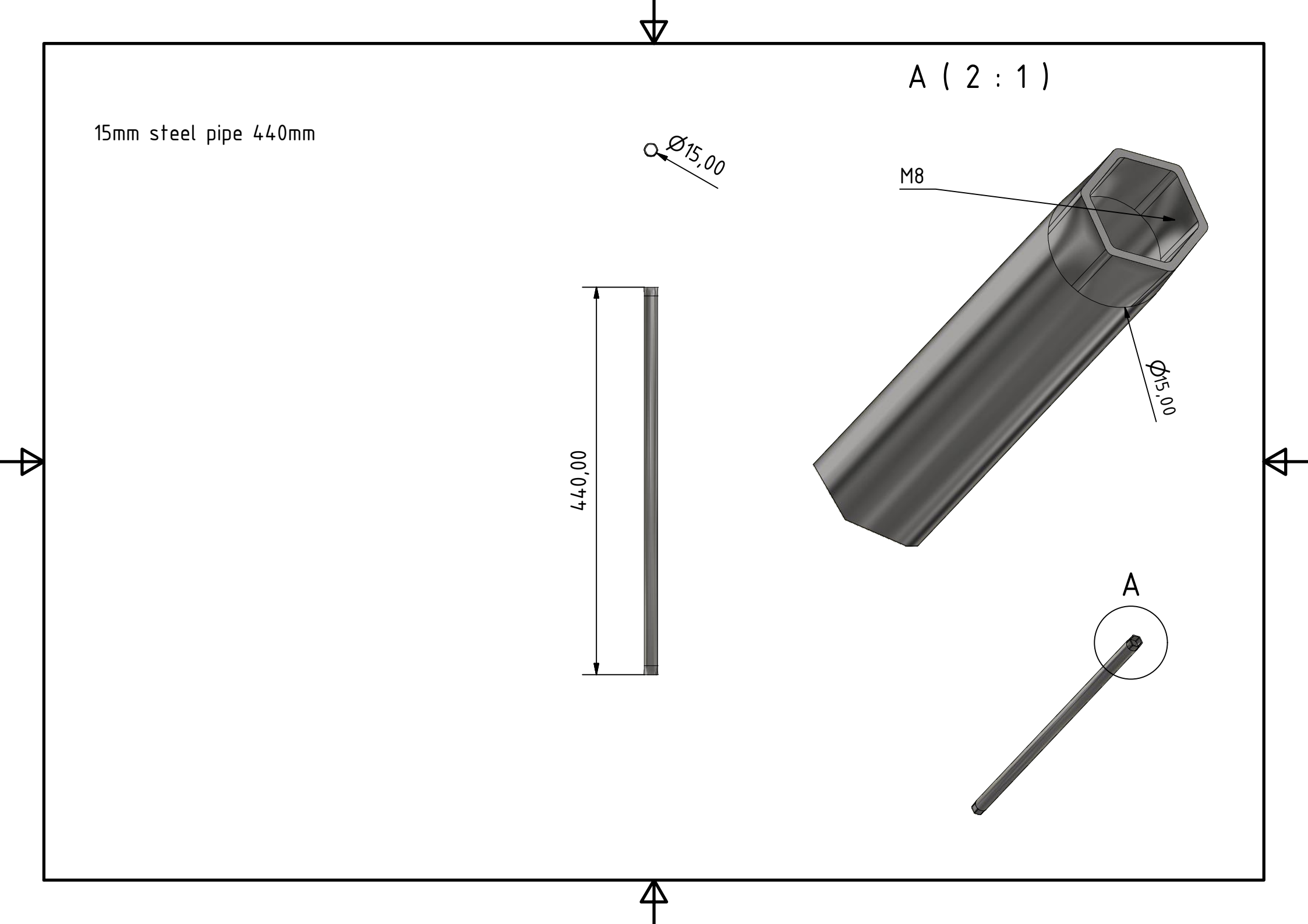
440,00

A (2 : 1)

M8

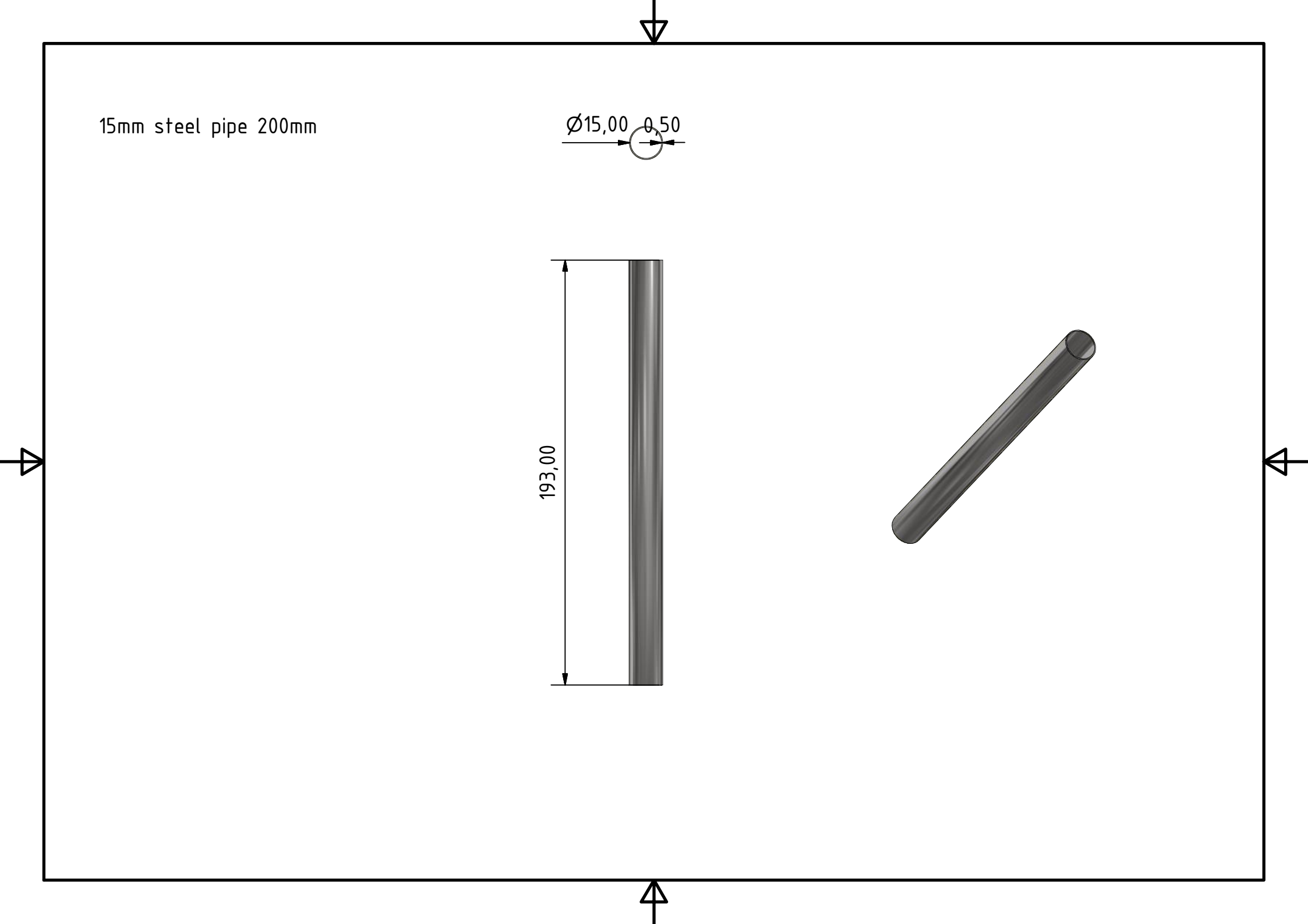
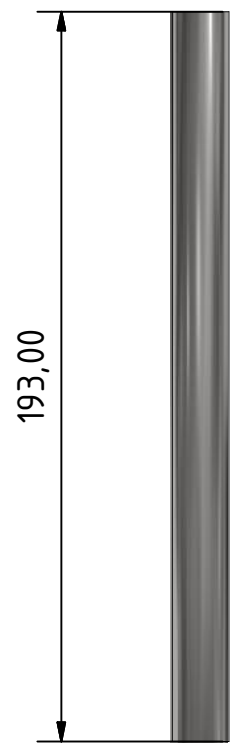
$\varnothing 15,00$

A

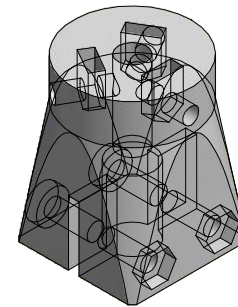
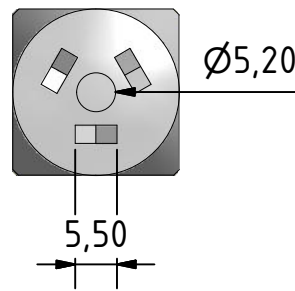
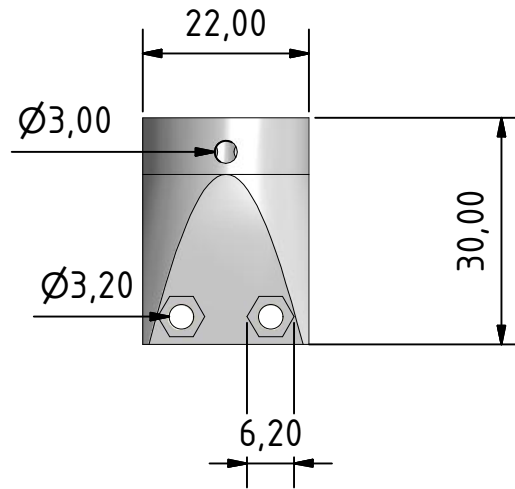
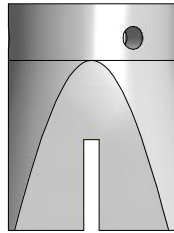
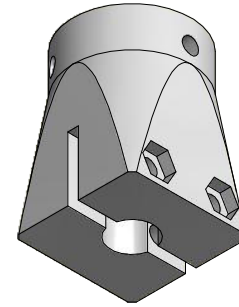
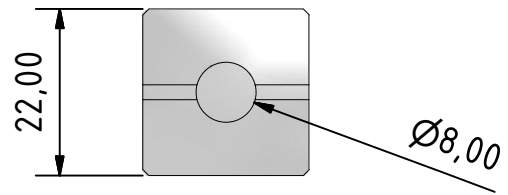


15mm steel pipe 200mm

Ø15,00 0,50



16-leadcrew_shaft_motor_mount



17-Morgan_arm_PSI_a

180,00

150,00

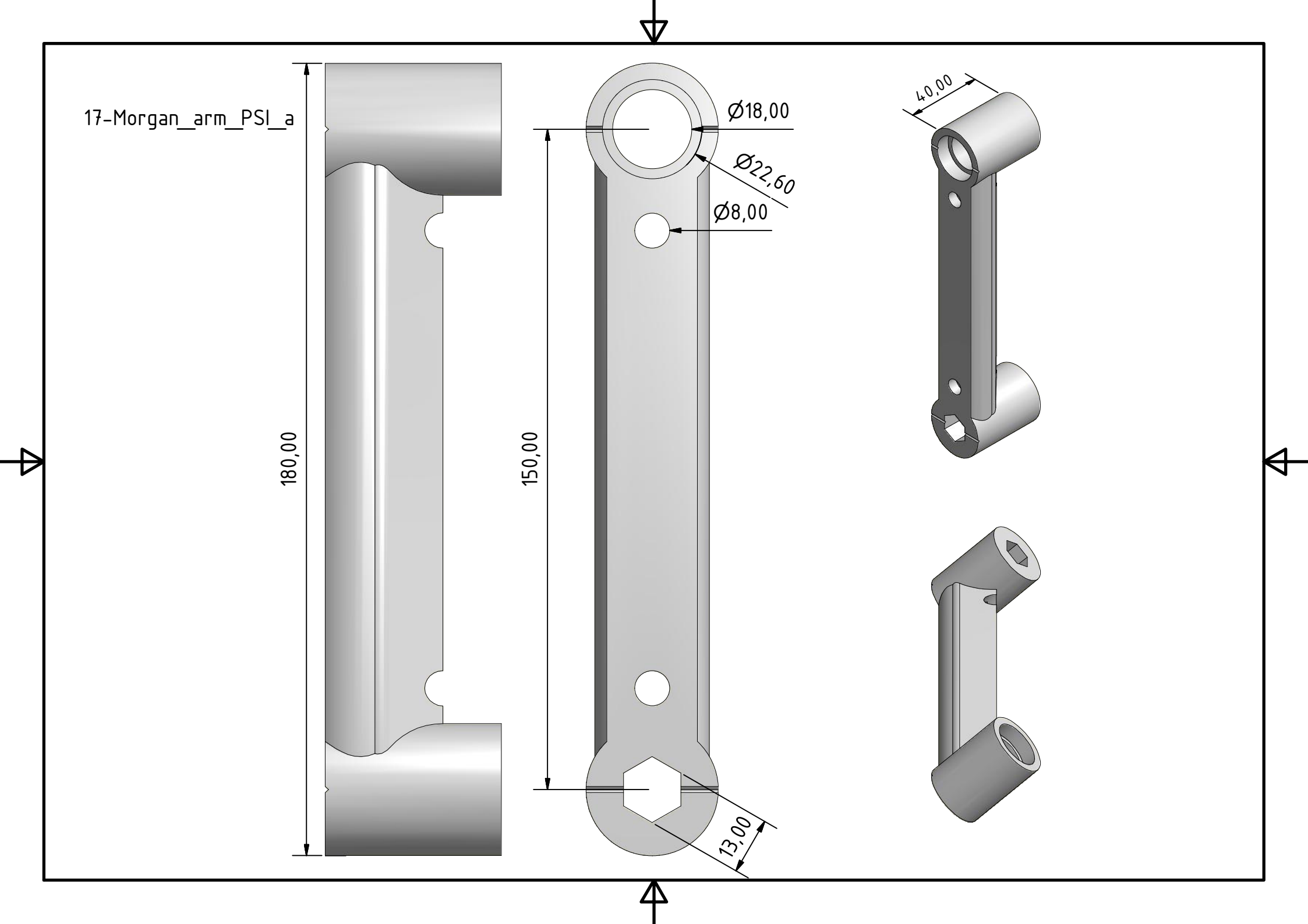
Ø18,00

Ø22,60

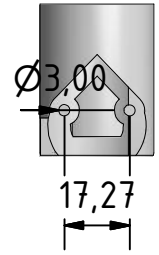
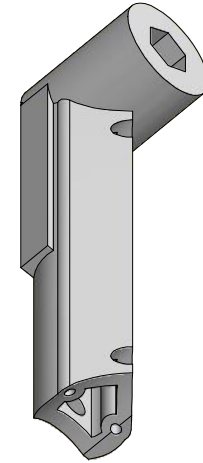
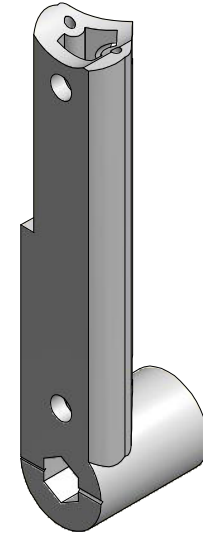
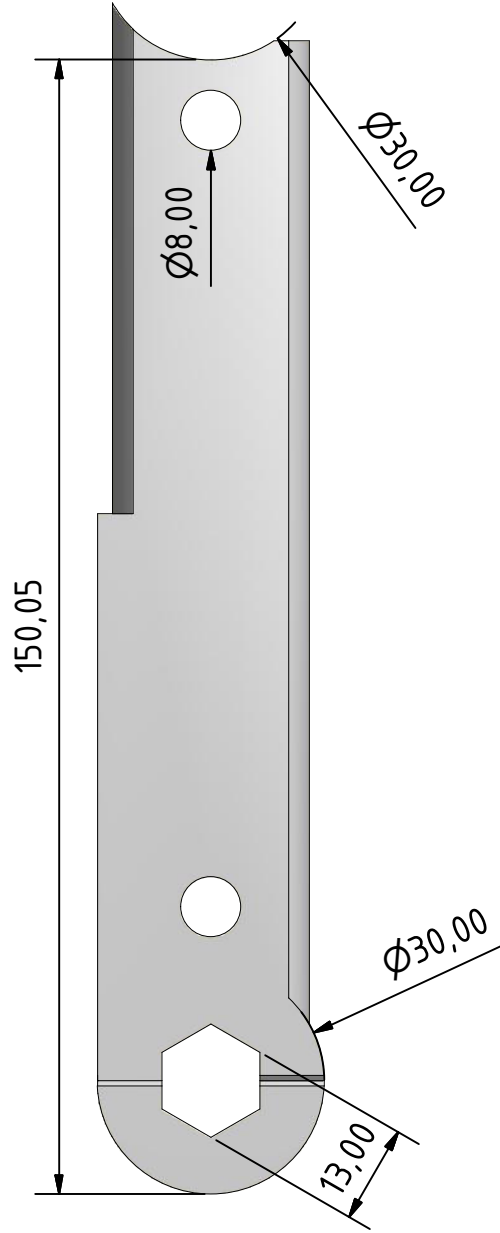
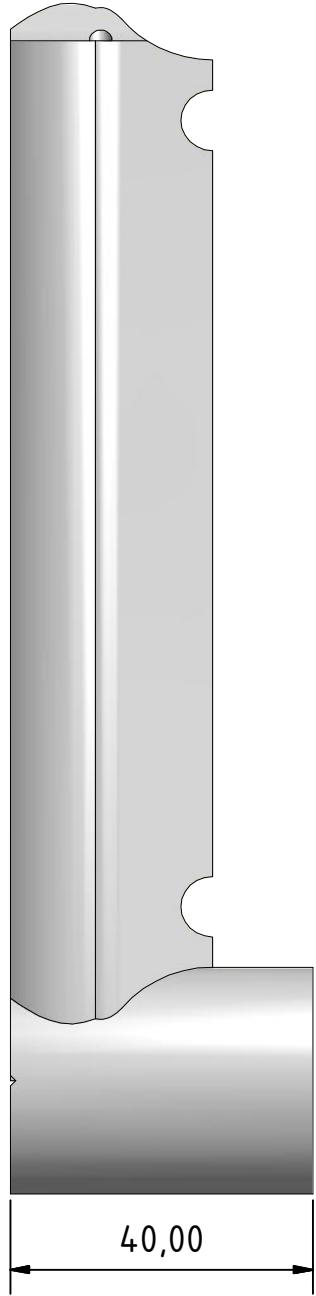
Ø8,00

13,00

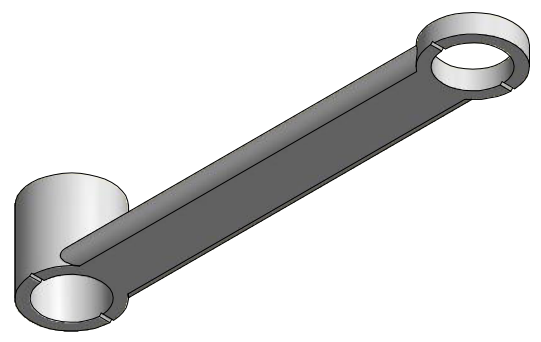
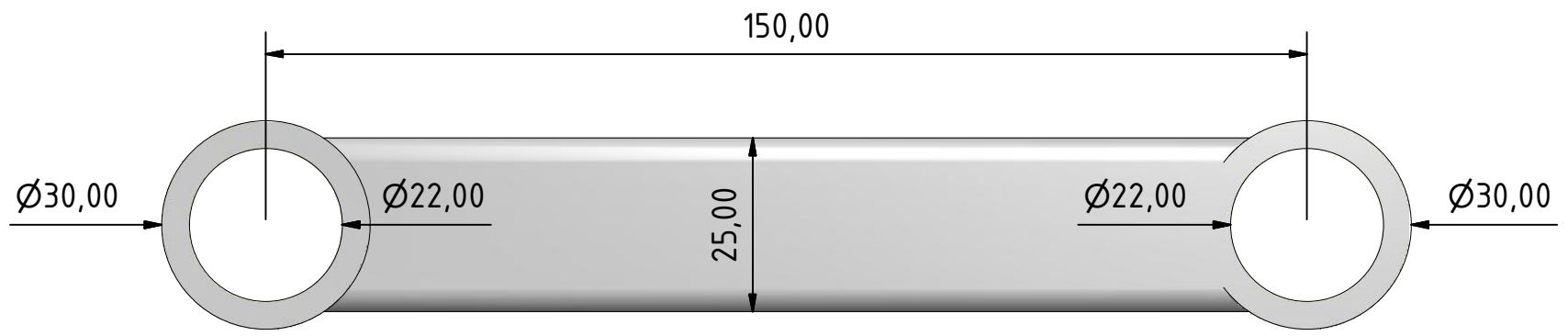
4,00



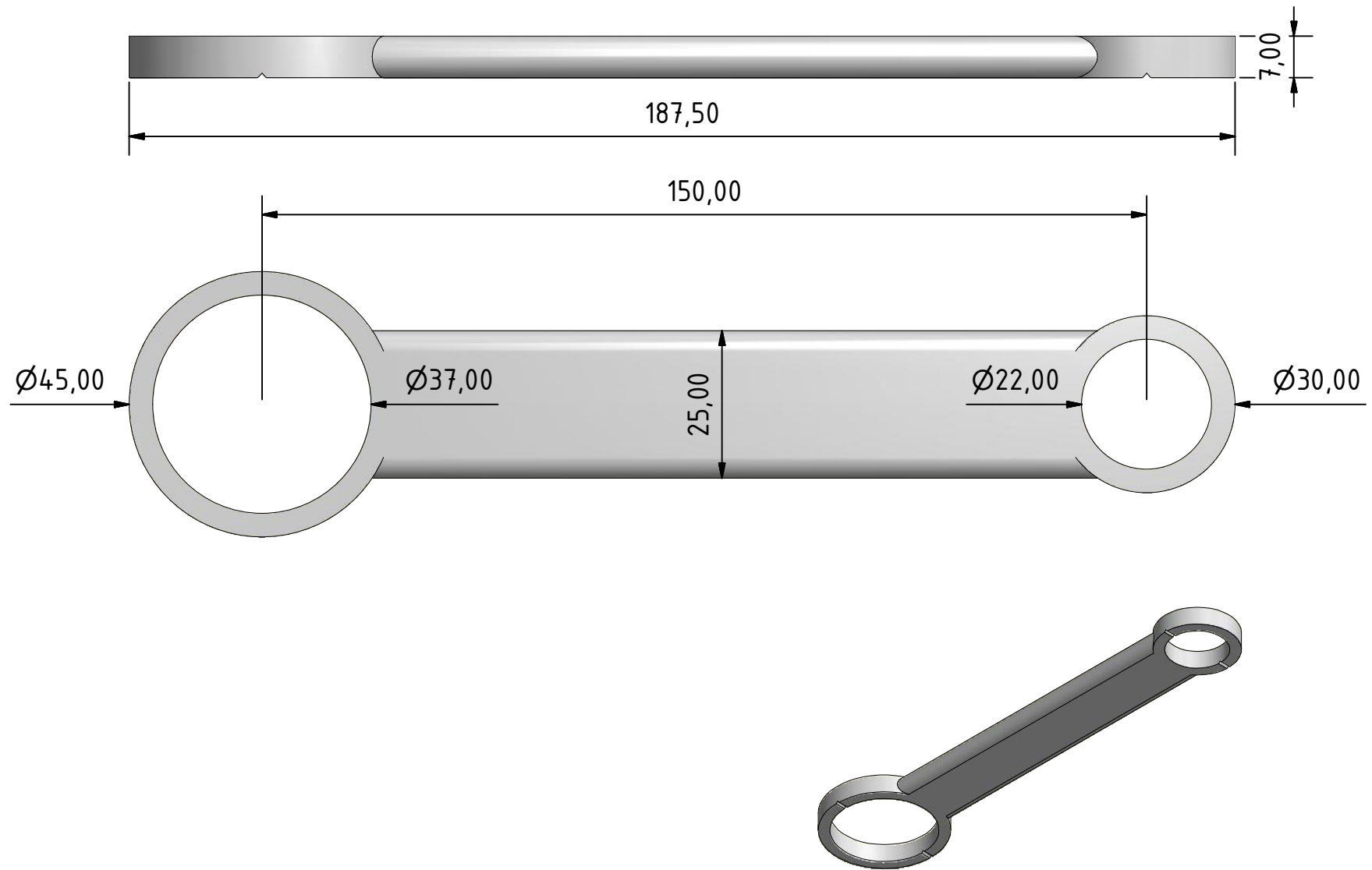
18-Morgan_arm_PSI_b



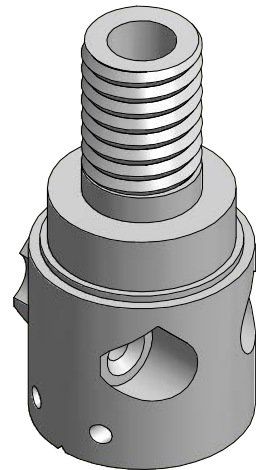
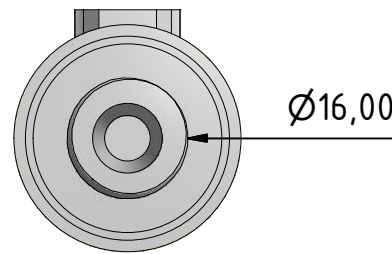
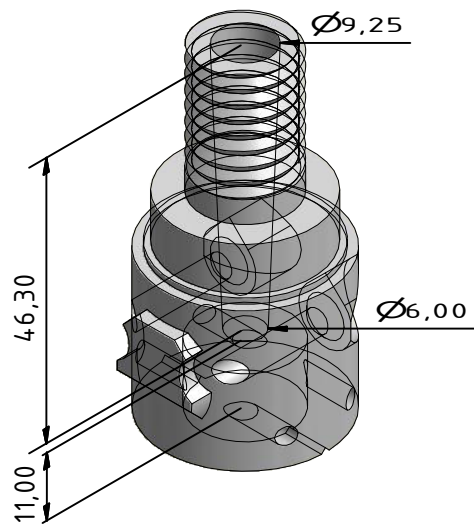
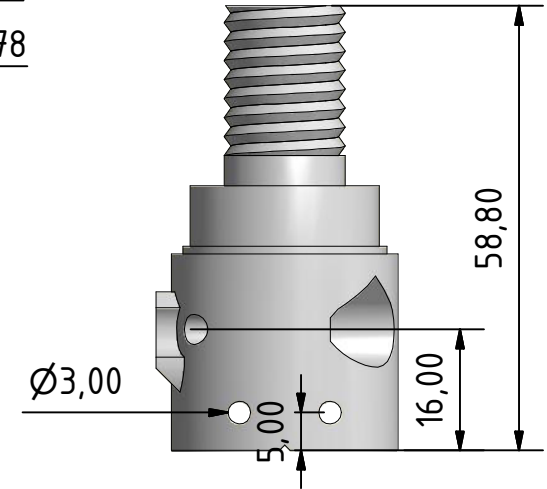
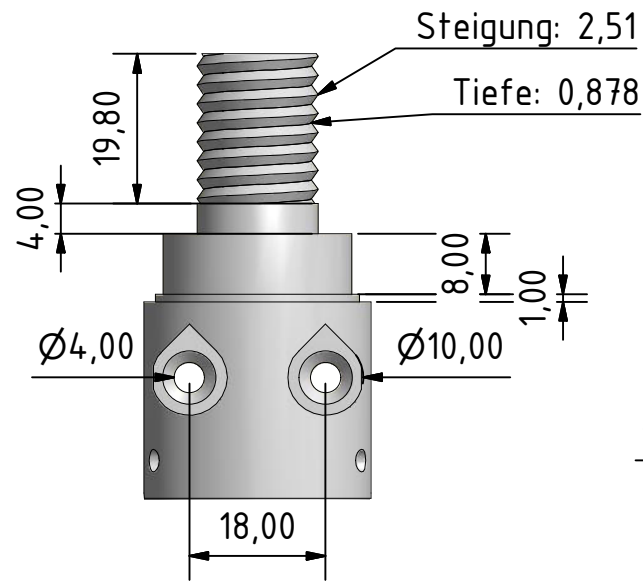
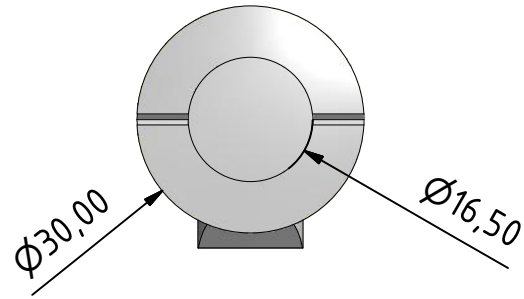
19-Morgan_arm_Theta_a



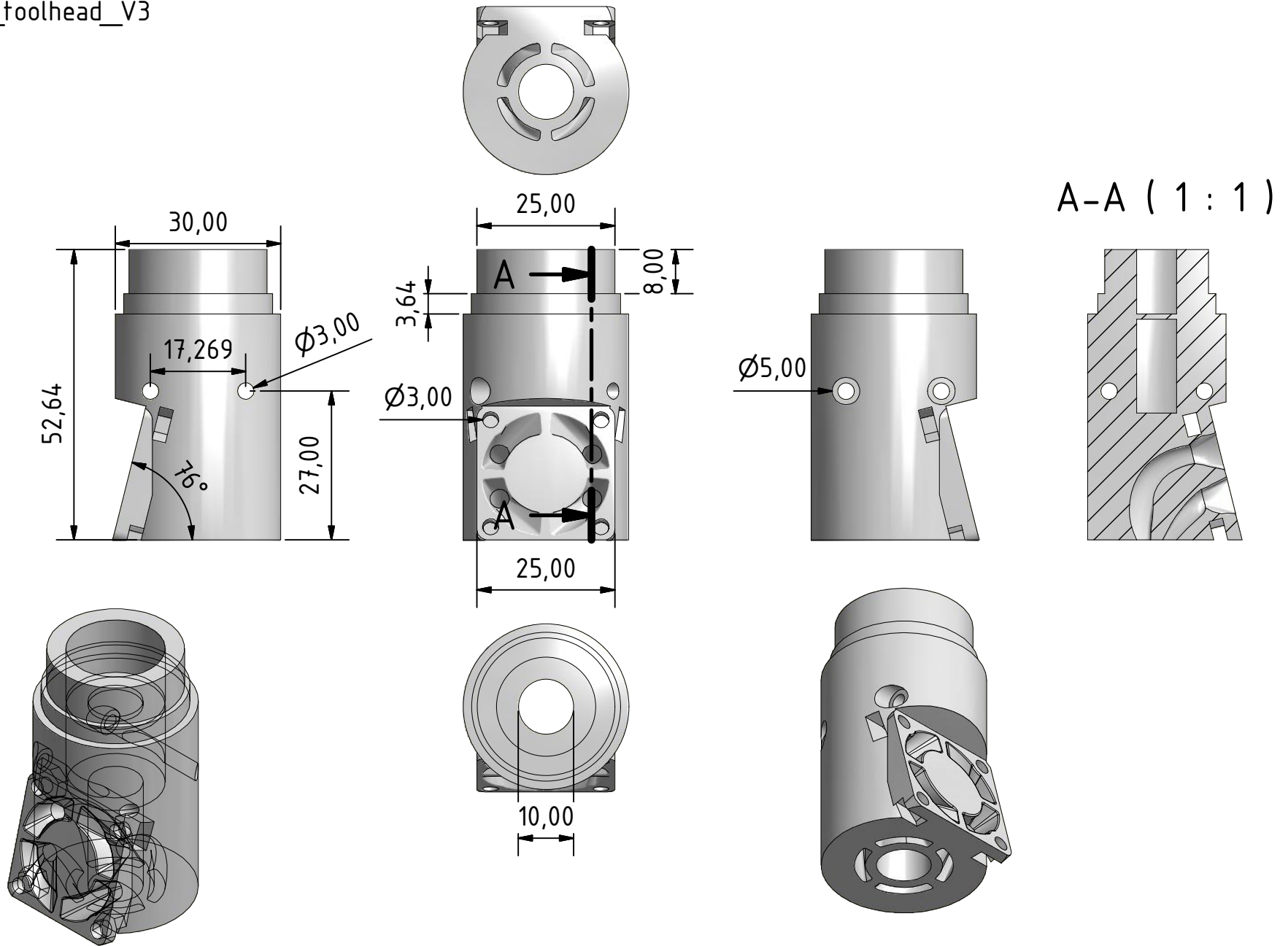
20-Morgan_arm_Theta_b



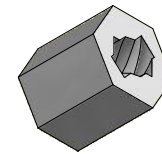
21-Morgan_toolhead



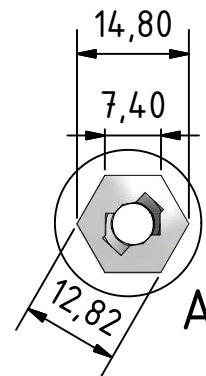
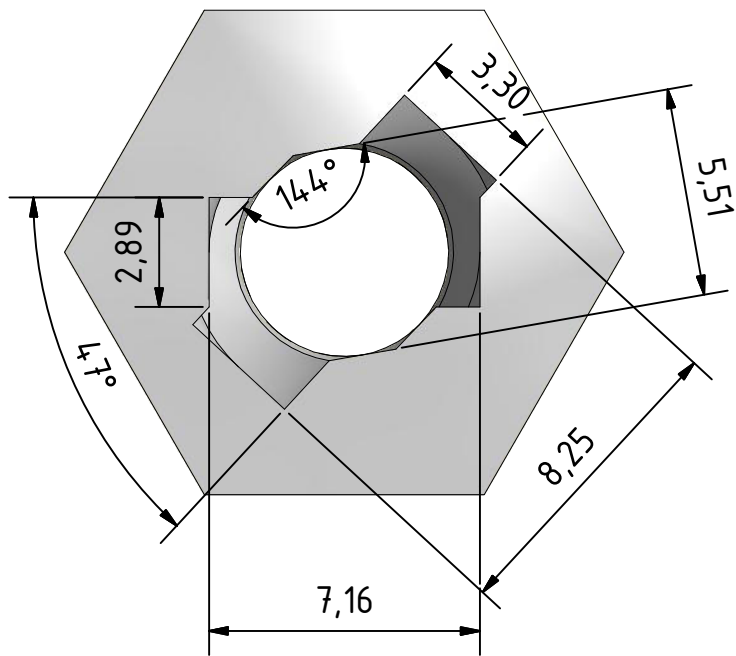
21-Morgan_toolhead_V3



22-Leadscrew-nut_Alpen8mmSDS



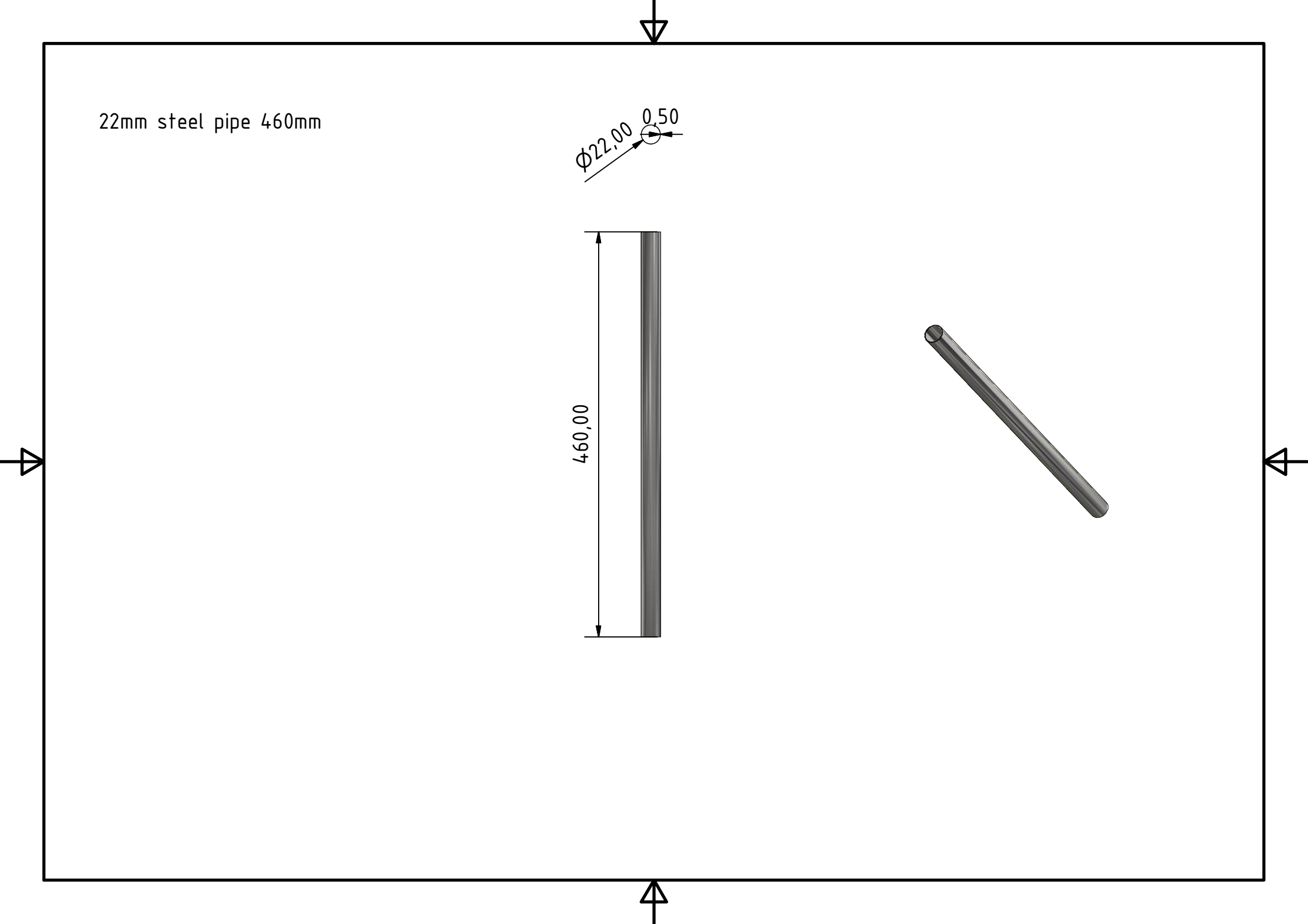
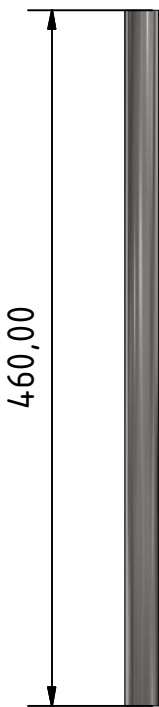
A (5 : 1)



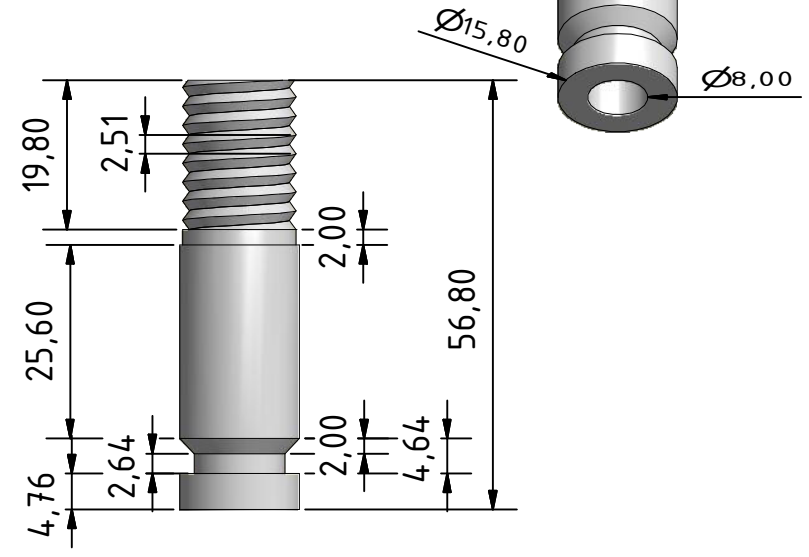
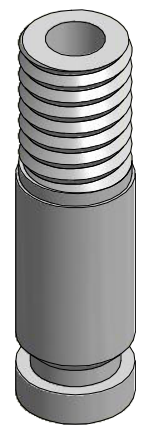
A

22mm steel pipe 460mm

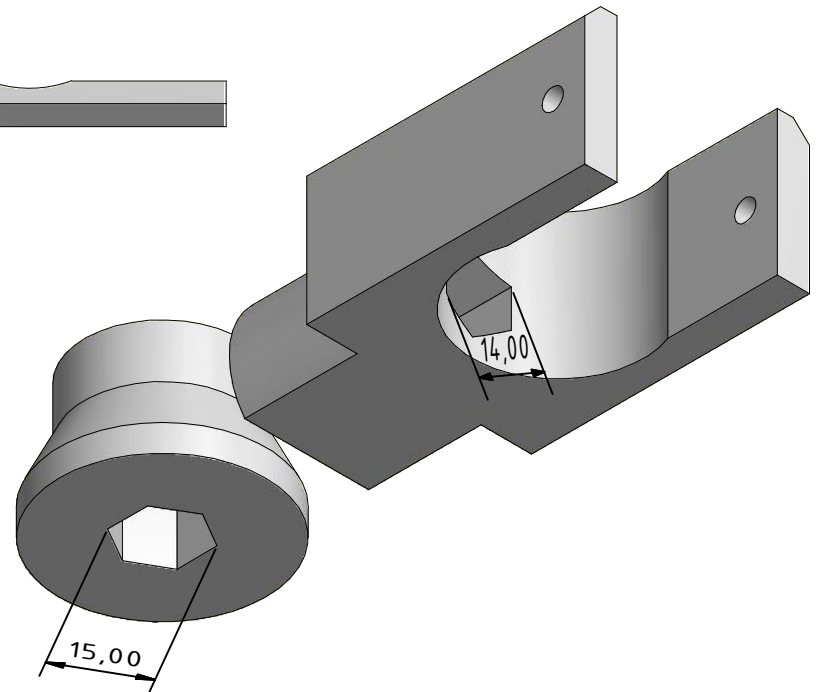
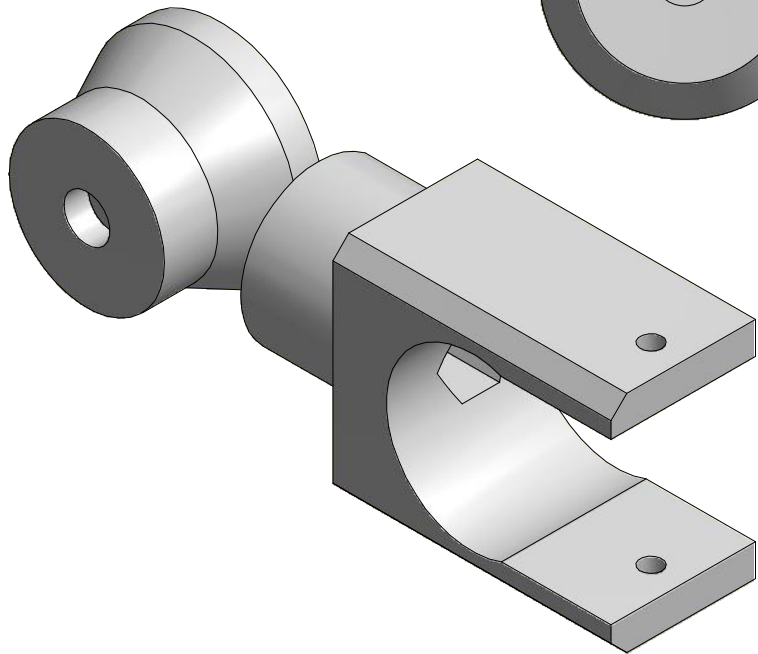
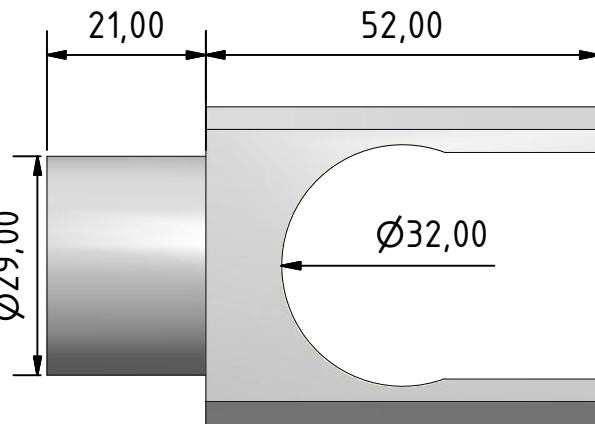
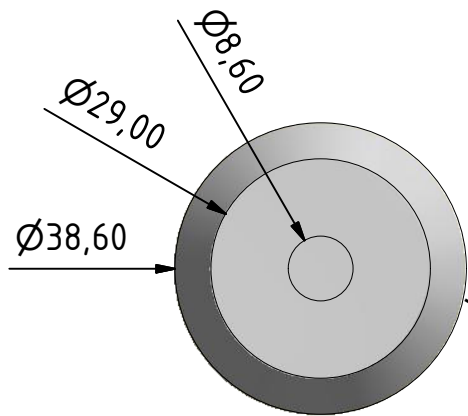
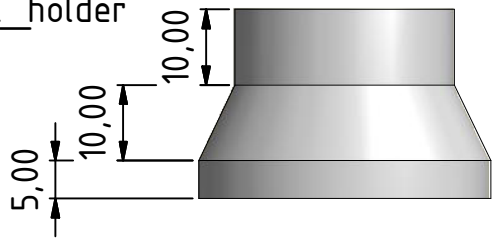
$\phi 22,00$ 0,50

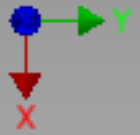
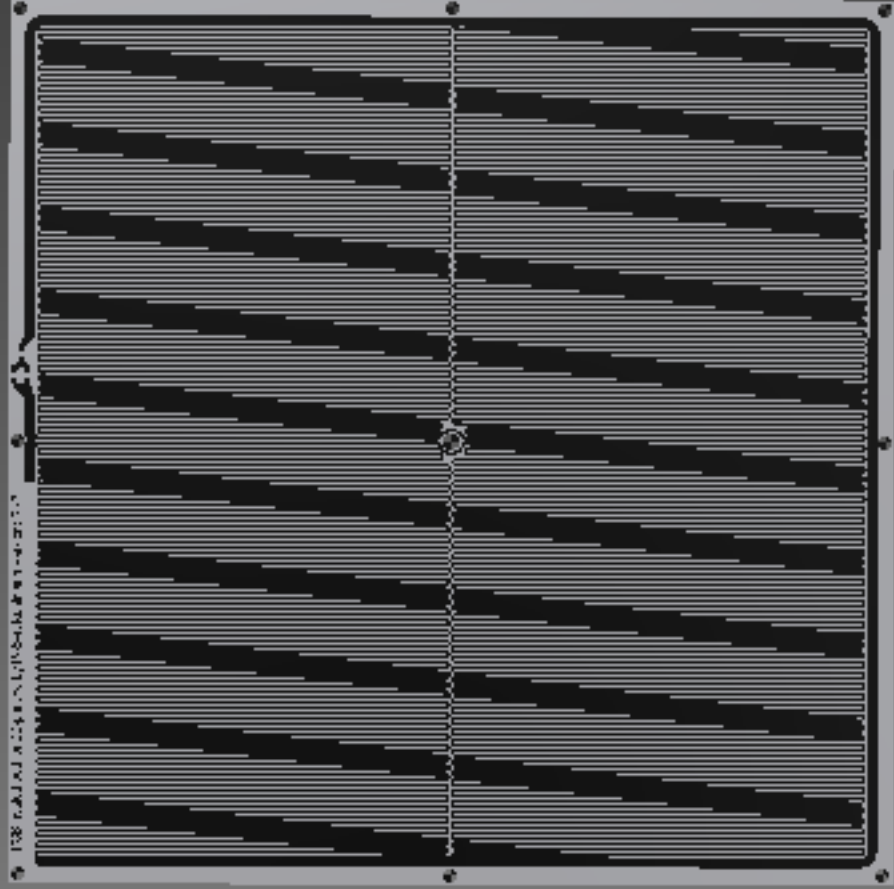


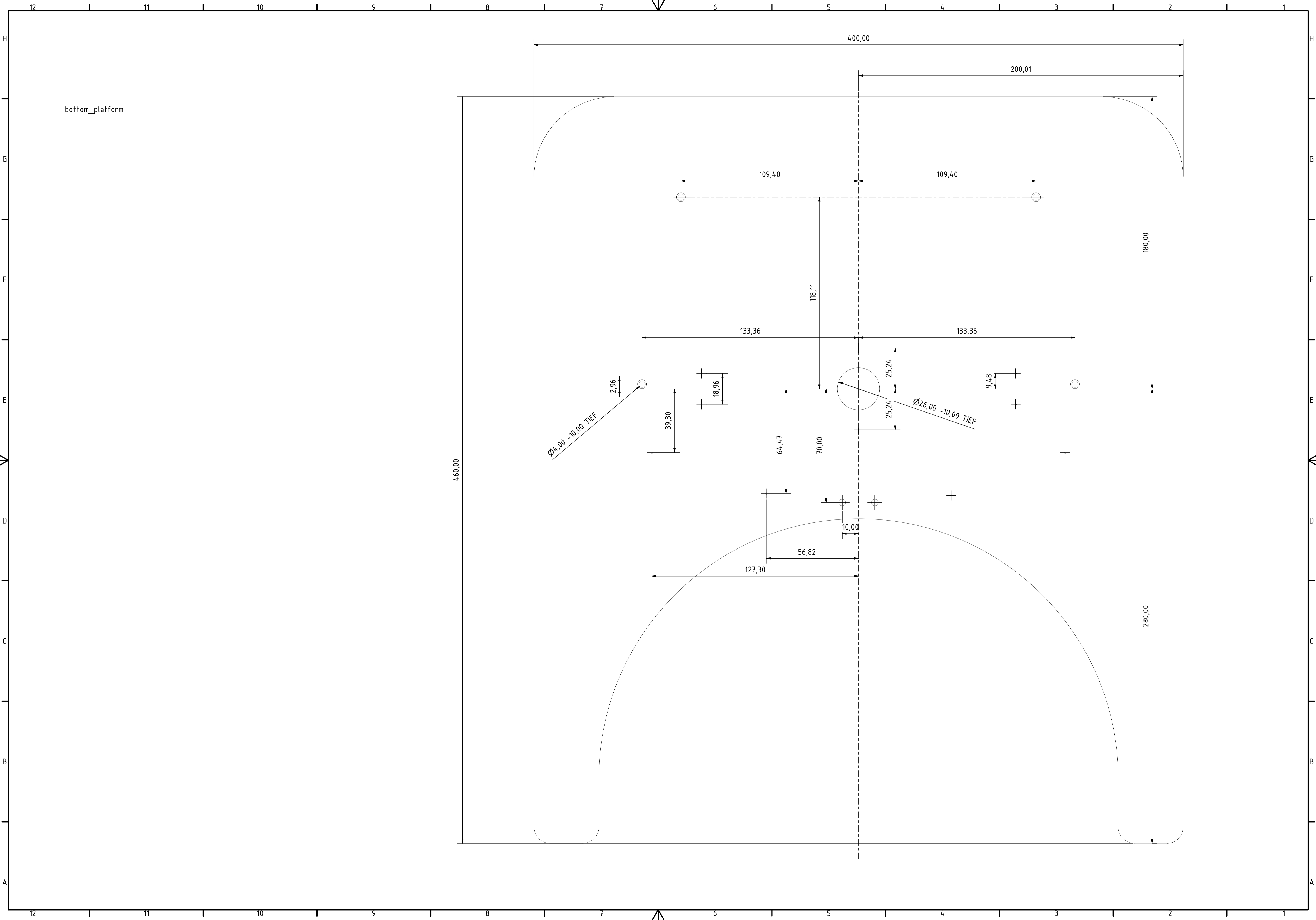
23-extruder_bowden_adaptor

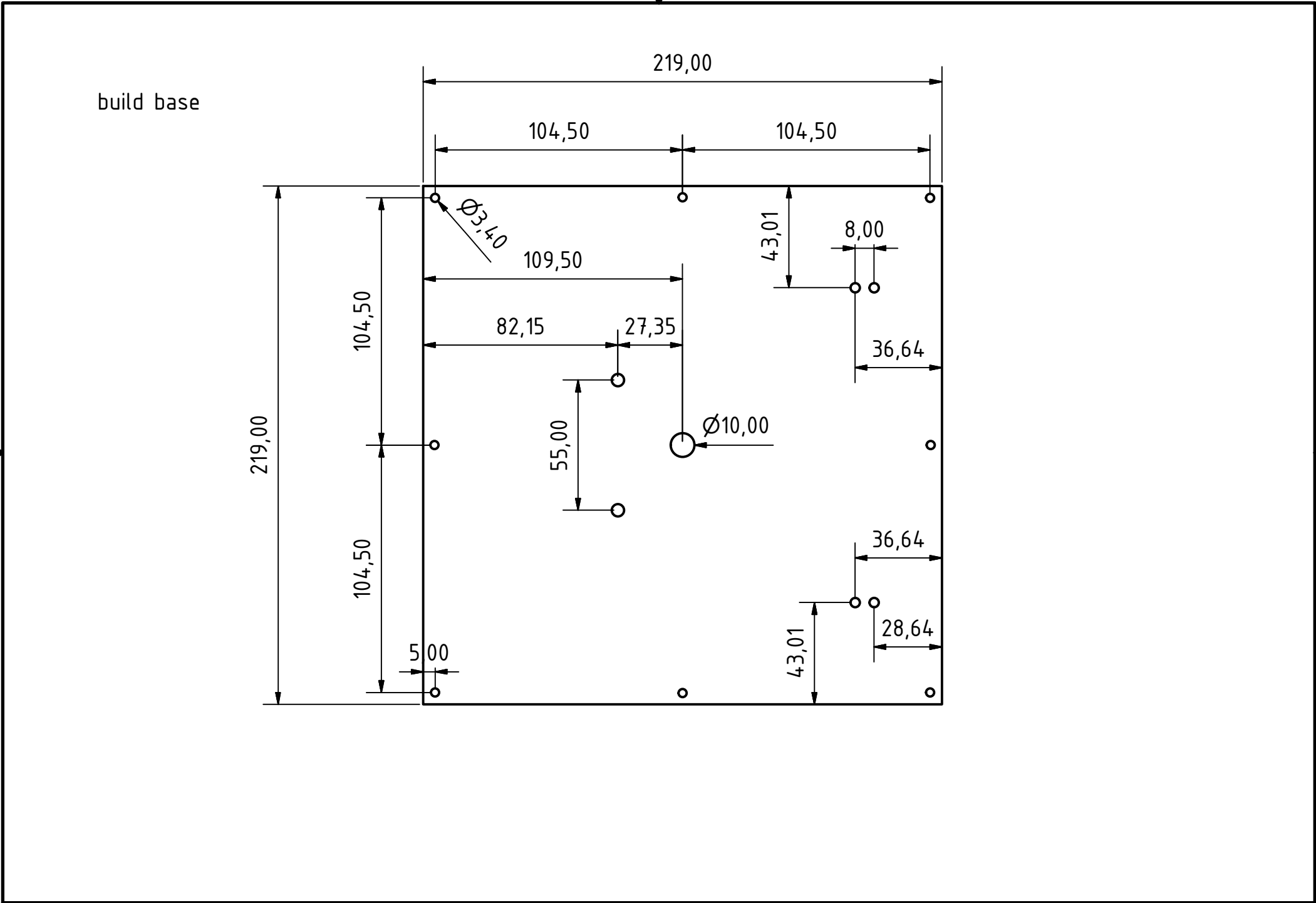


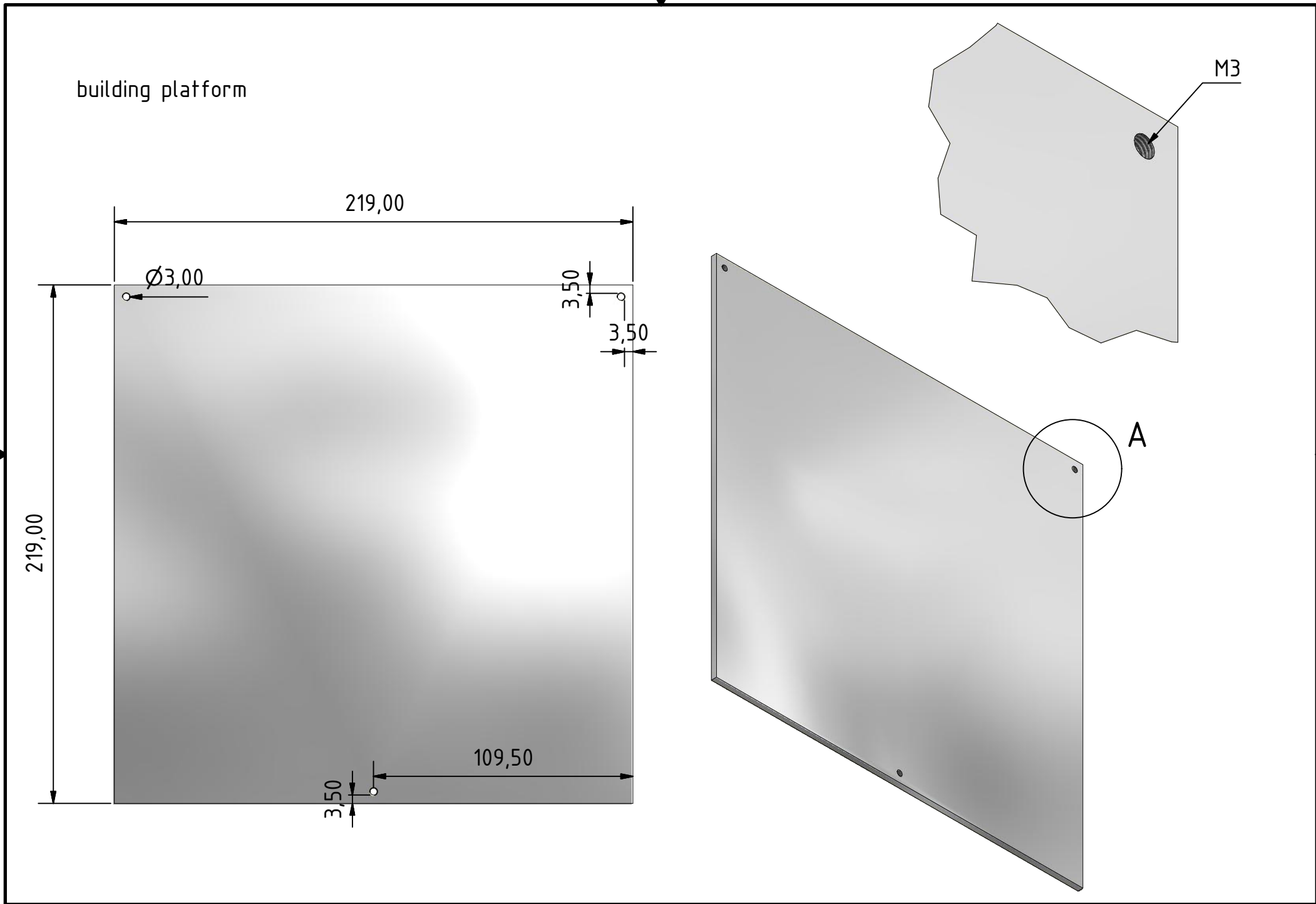
24-Morgan_Spool_holder



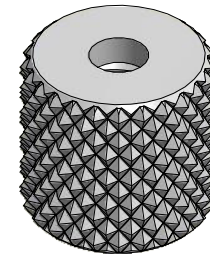
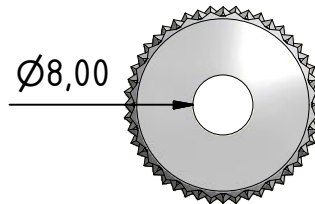
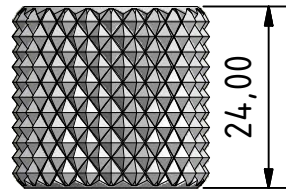
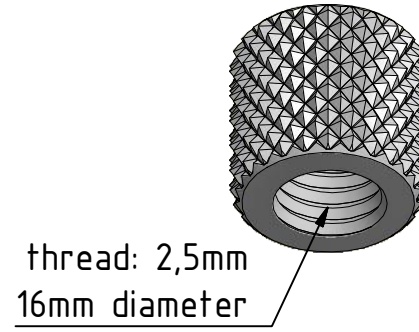
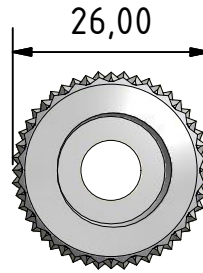




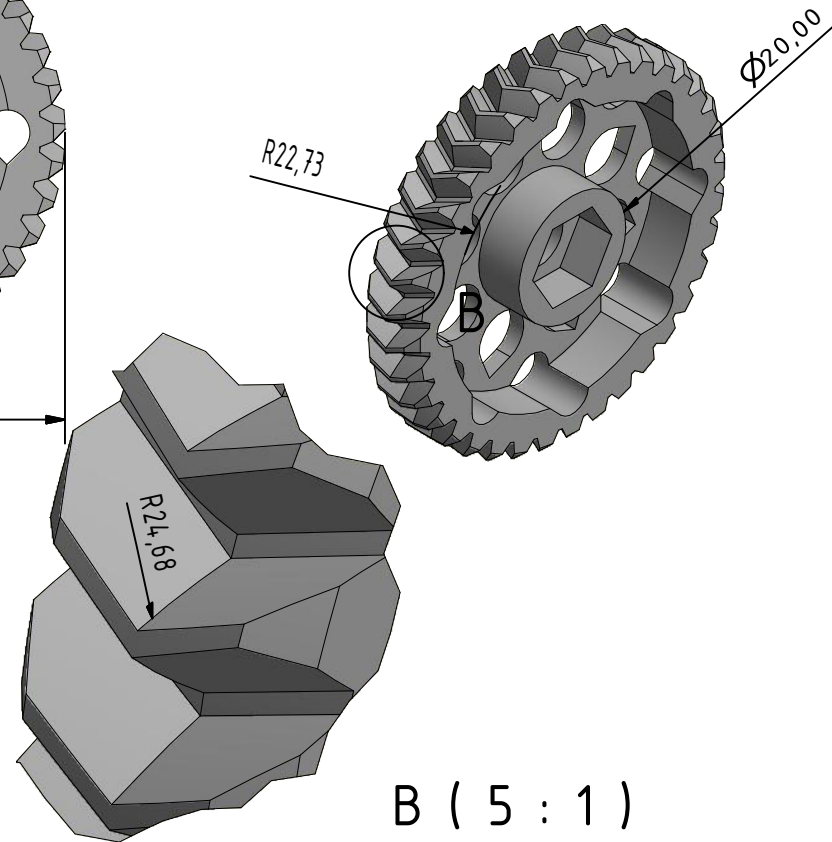
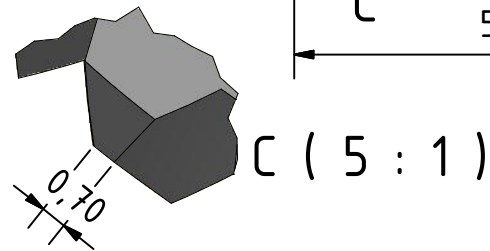
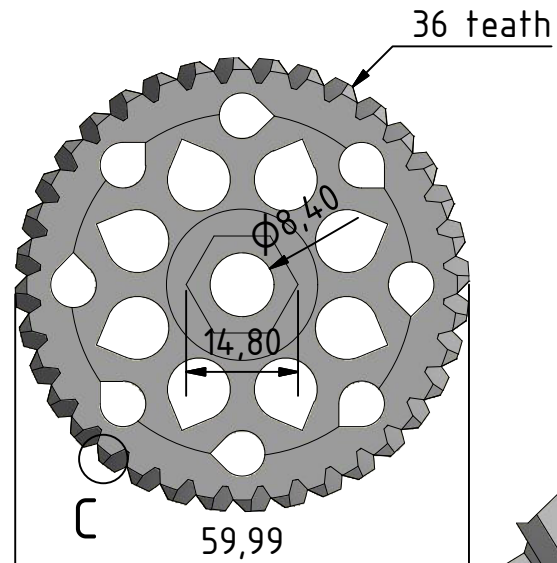
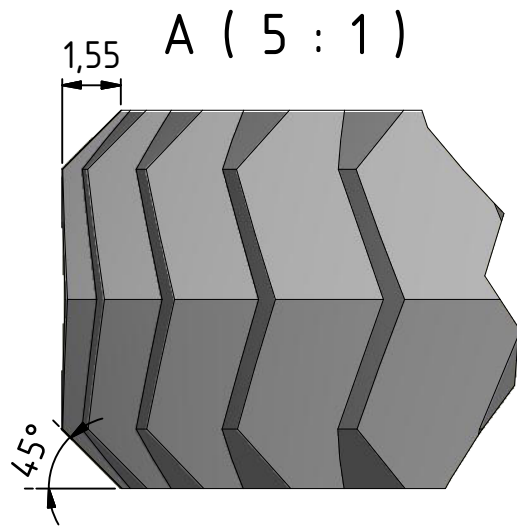
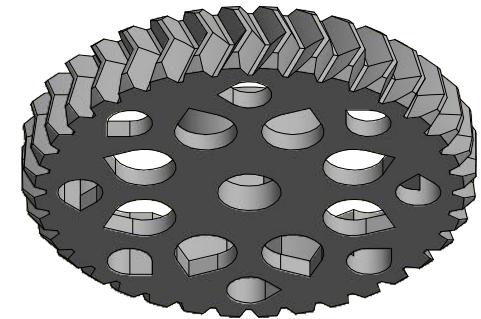
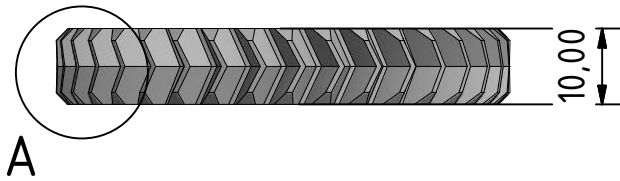




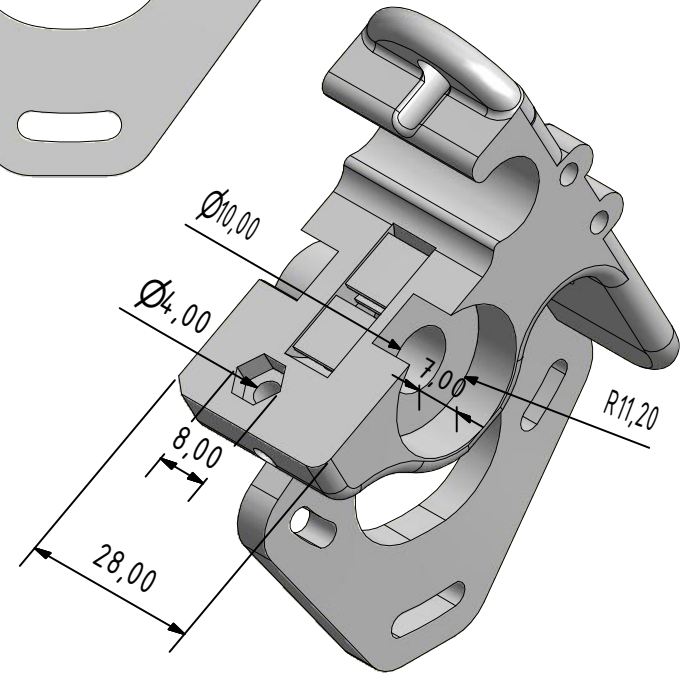
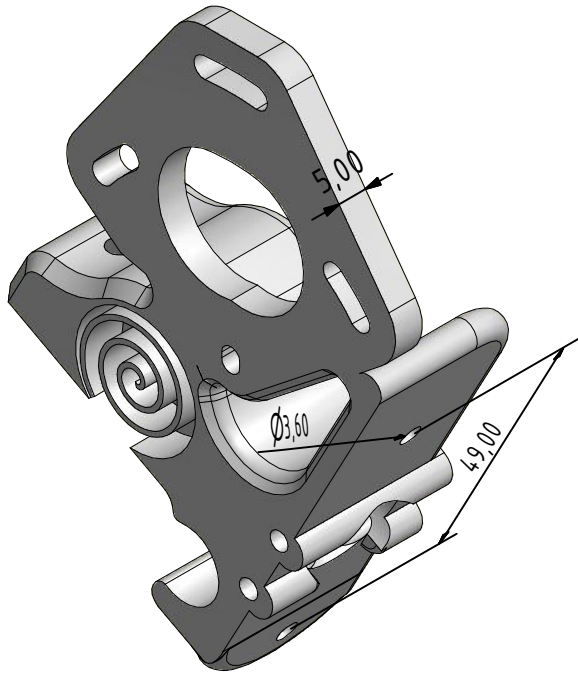
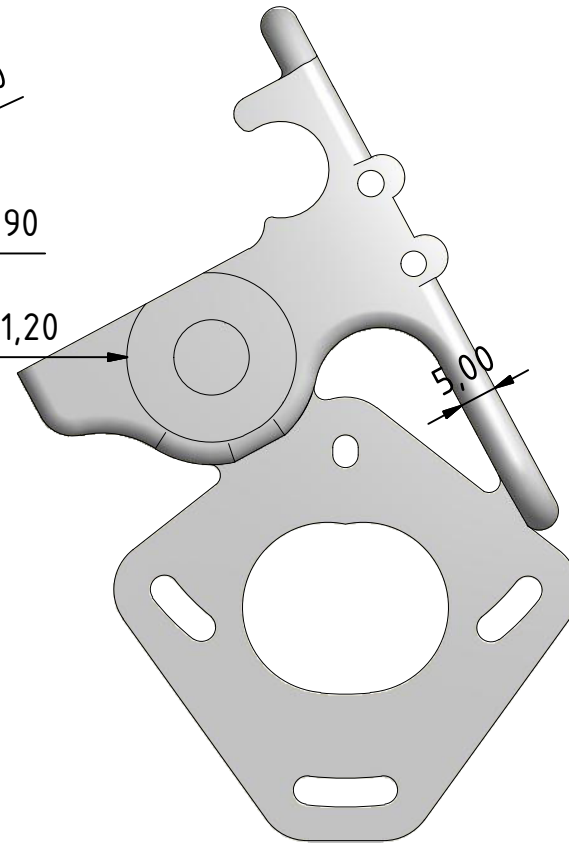
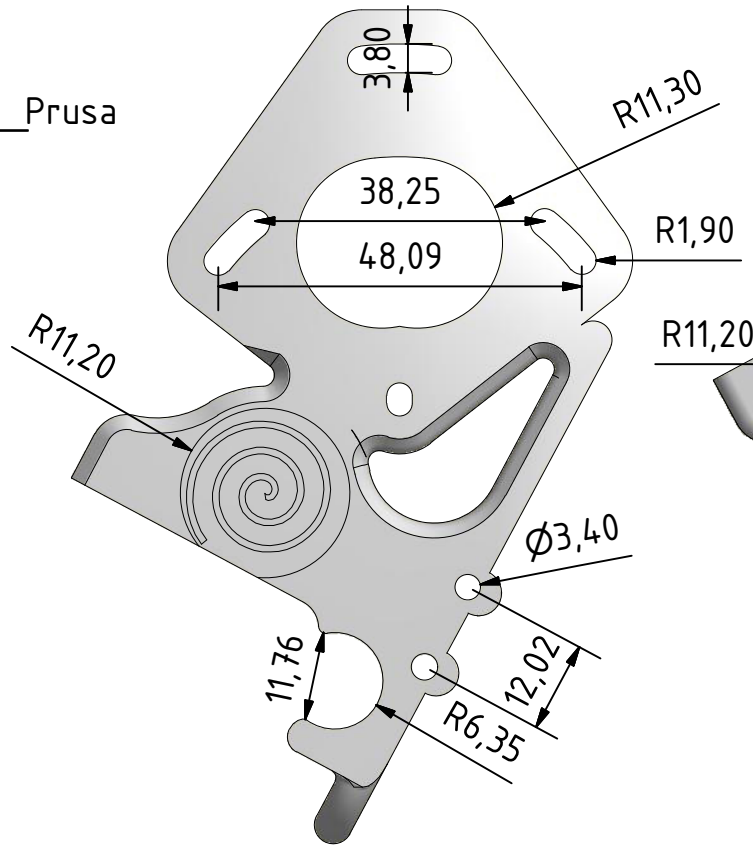
cap_2



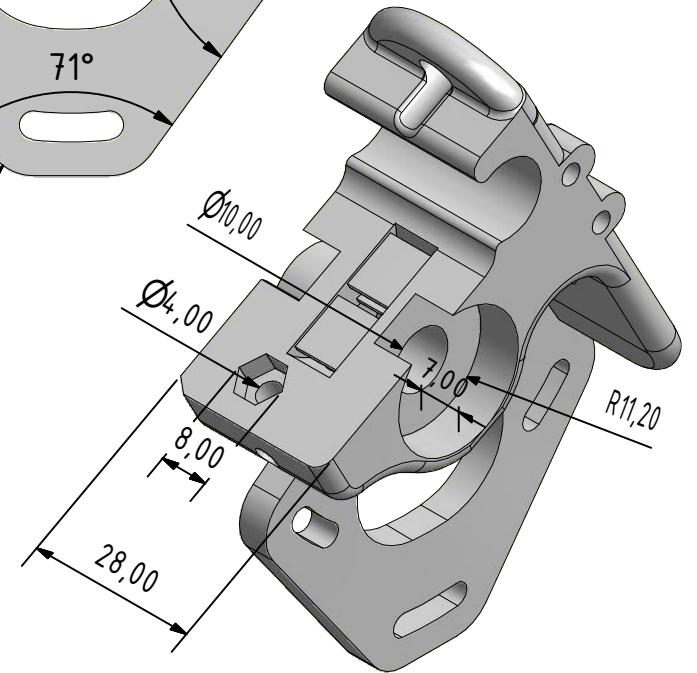
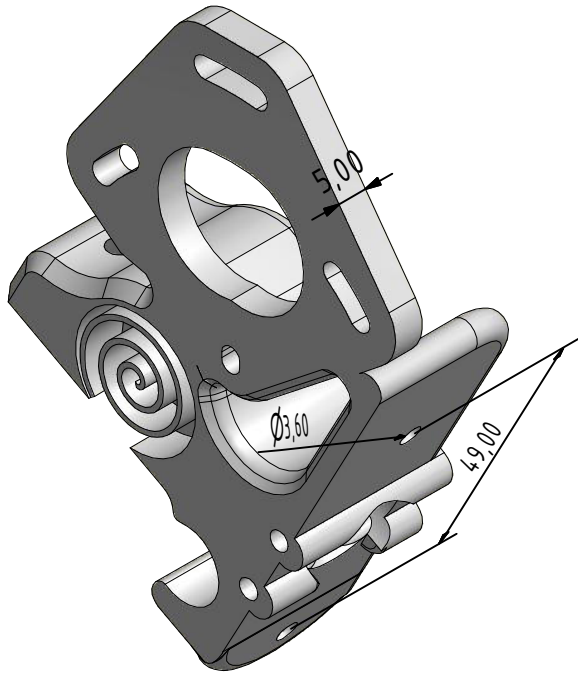
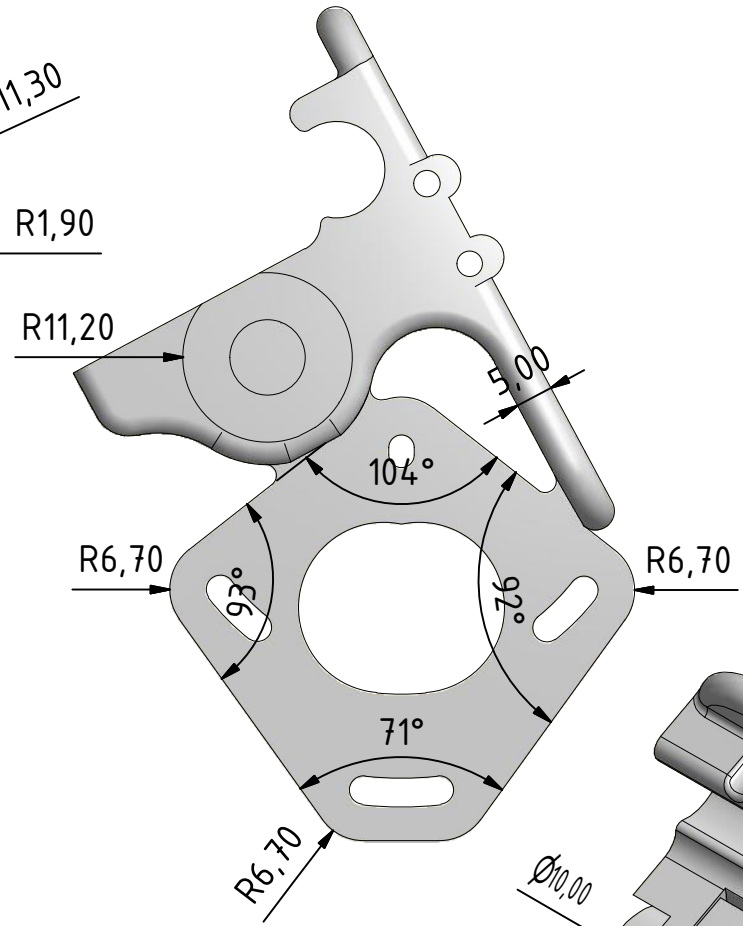
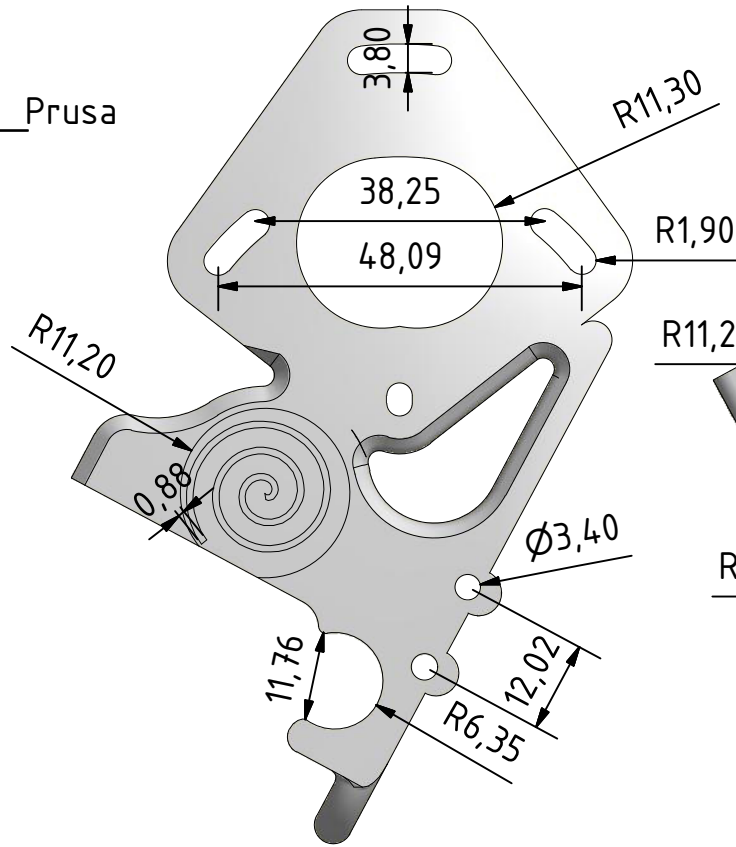
Eckstruder_Big_Gear_Herringbone



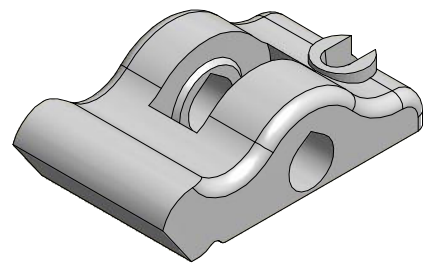
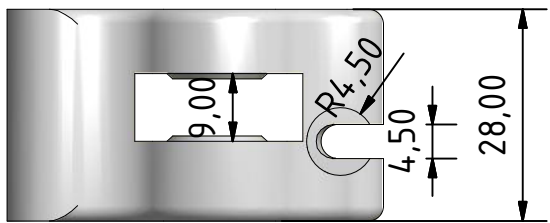
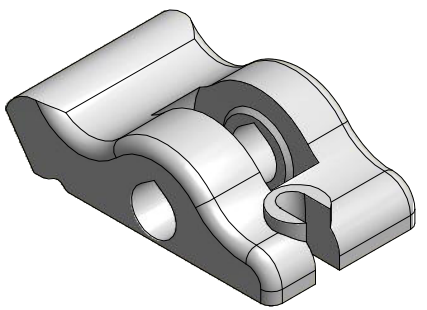
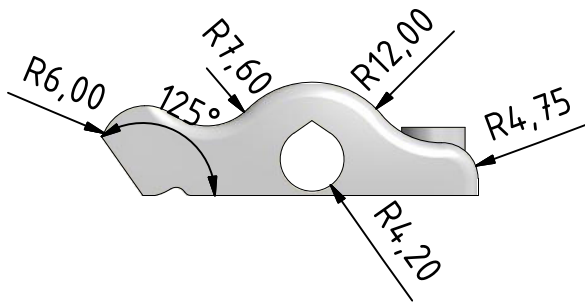
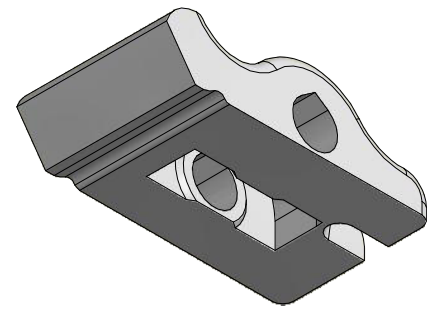
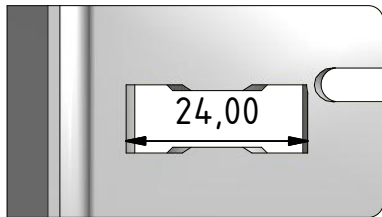
Eckstruder_Block_for_Prusa



Eckstruder_Block_for_Prusa



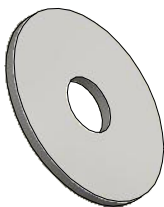
Eckstruder_Iidler_Block_for_Prusa



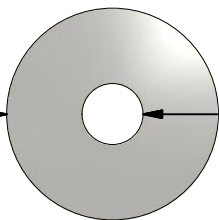
M8 washer 28mm



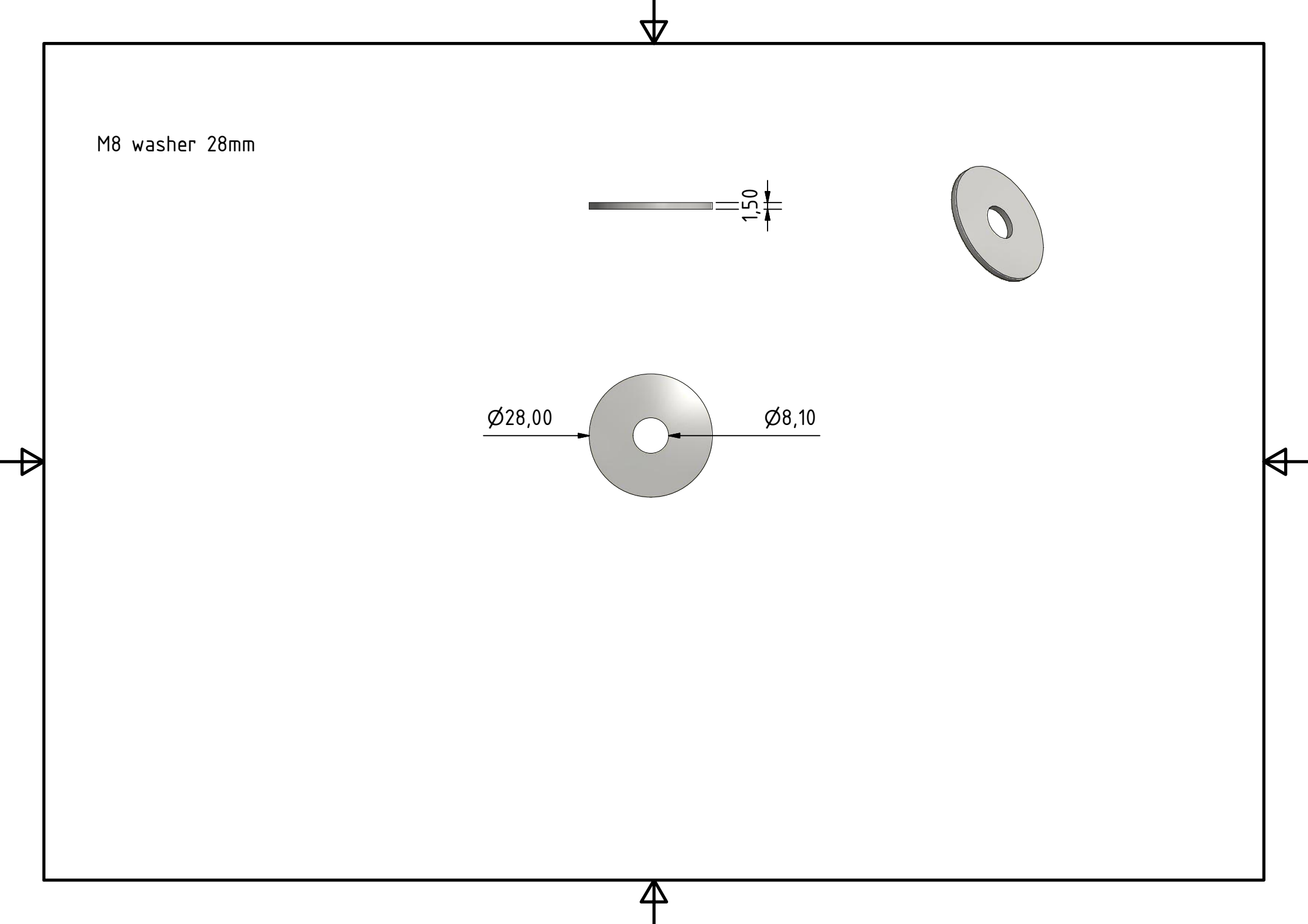
1,50



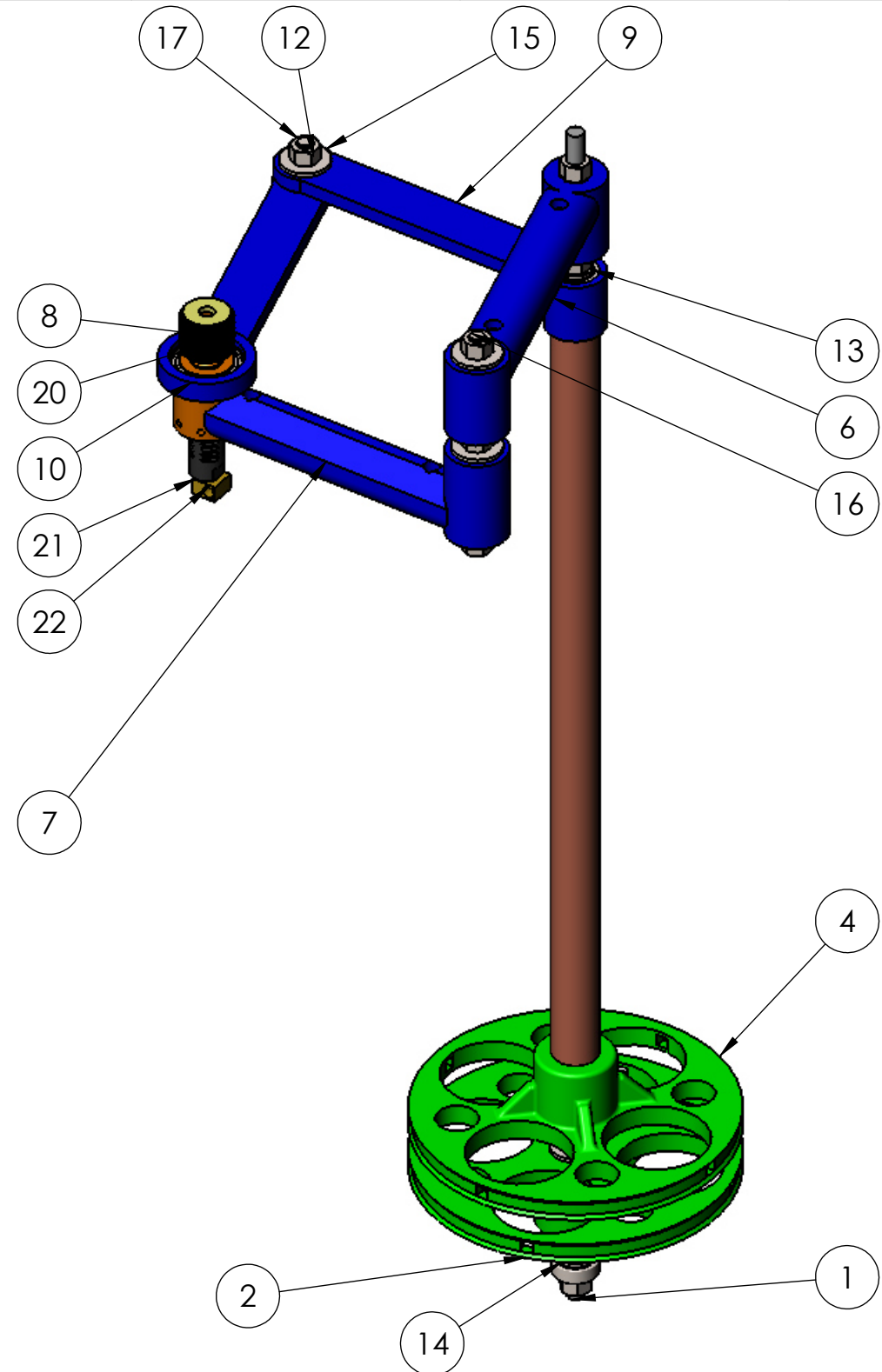
Ø28,00



Ø8,10

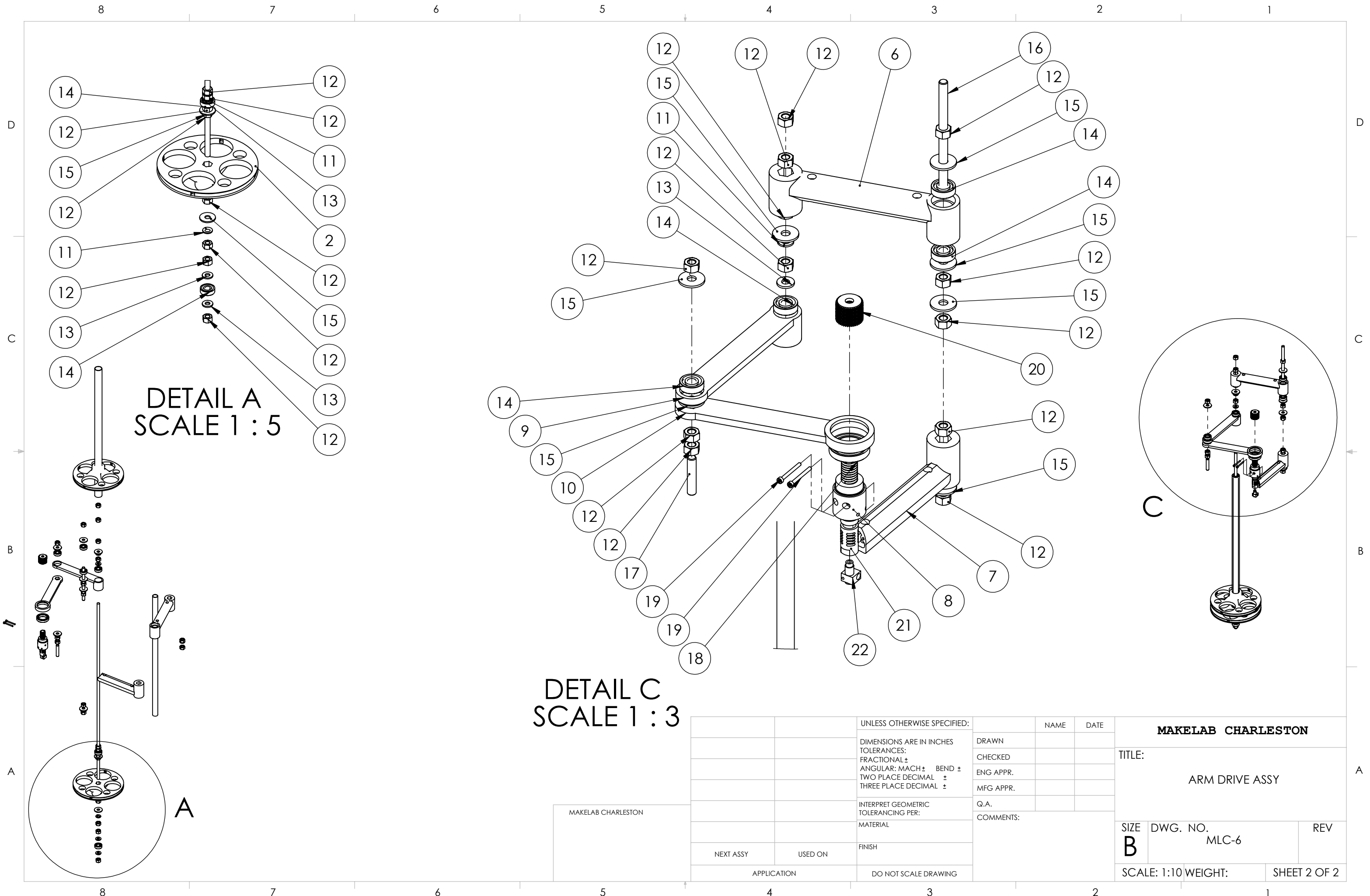


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MLC-1-008	M8 ALL THREAD 650MM	1
2	MLC-1-0010	DRIVE WHEEL ROD	1
3	MLC-1-0026	CENTER COPPER PIPE	1
4	MLC-1-009	DRIVE WHEEL TUBE	1
5	MLC-1-007	3/4" COPPER TUBING	1
6	MLC-1-0016	Morgan_arm_PSI_a	1
7	MLC-1-0017	Morgan_arm_PSI_b	1
8	MLC-1-0018	MORGAN TOOLHEAD	1
9	MLC-1-0019	MORGAN THETA ARM A	1
10	MLC-1-0020	MORGAN THETA ARM B	1
11	Spring washer DIN 128 - A8		6
12	Hexagon Nut ISO 4034 - M8 - N		22
13	DIN 6902-A7.4		5
14	SKF - 608 - 8,SI,NC,8_68		6
15	Washer DIN 9021 - 8.4		9
16	AM -- M8 x 120 N		1
17	AM -- M8 x 40 N		1
18	SKF - 61805 - 22,SI,NC,22_68		1
19	B18.3.1M - 3 x 0.5 x 30 Hex SHCS -- 18NHX		2
20	MLC-1-030	TIGHTENING CAP	1
21	JHEAD	JHEAD	1
22	JHEAD NOZZLE		1



MAKELAB CHARLESTON

		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	MAKELAB CHARLESTON	
		DIMENSIONS ARE IN INCHES	DRAWN		TITLE: ARM DRIVE ASSY	
		TOLERANCES:	CHECKED			
		FRACTIONAL ±	ENG APPR.			
		ANGULAR: MACH ± BEND ±	MFG APPR.			
		TWO PLACE DECIMAL ±	Q.A.		SIZE	DWG. NO.
		THREE PLACE DECIMAL ±	COMMENTS:		B	MLC-6
		INTERPRET GEOMETRIC TOLERANCING PER:			REV	
		MATERIAL			SCALE: 1:10	WEIGHT:
NEXT ASSY	USED ON	FINISH				SHEET 1 OF 2
APPLICATION		DO NOT SCALE DRAWING				



DETAIL A
SCALE 1 : 5

DETAIL C
SCALE 1 : 3

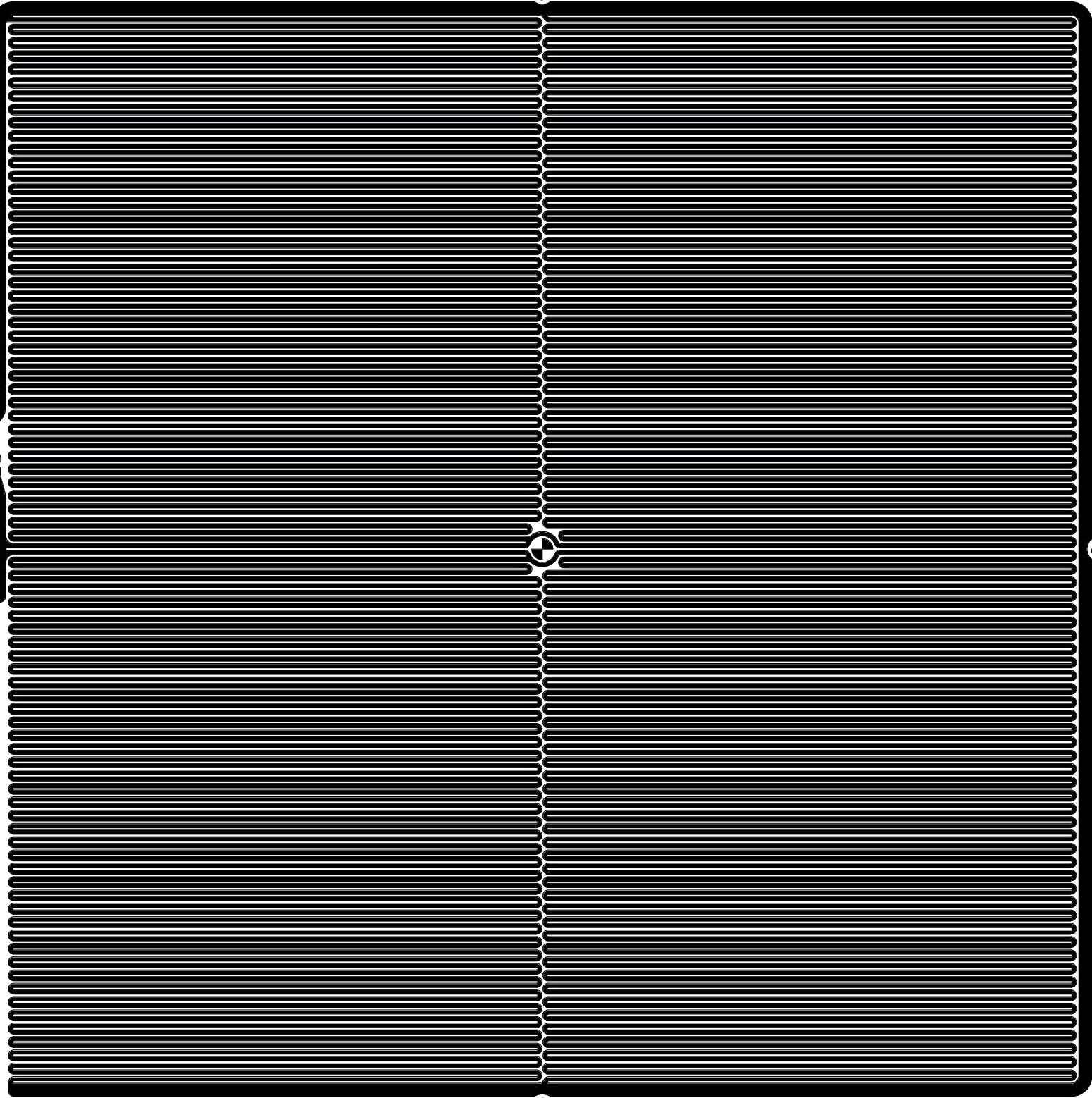
MAKELAB CHARLESTON

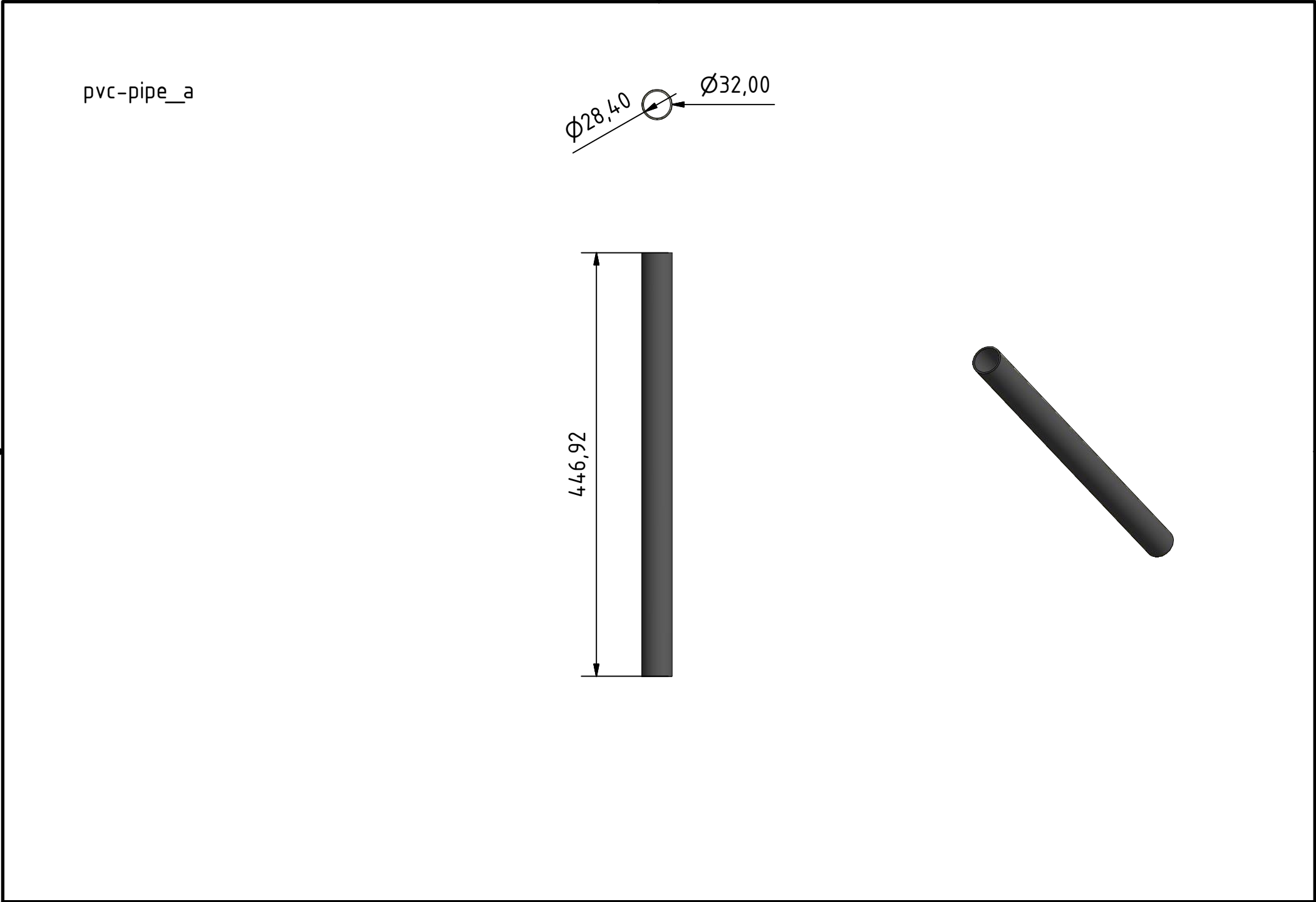
NEXT ASSY USED ON

APPLICATION DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	MAKELAB CHARLESTON		
DIMENSIONS ARE IN INCHES		DRAWN				
TOLERANCES:		CHECKED		TITLE: ARM DRIVE ASSY		
FRACTIONAL ±		ENG APPR.				
ANGULAR: MACH ± BEND ±		MFG APPR.				
TWO PLACE DECIMAL ±		Q.A.		SIZE	DWG. NO.	REV
THREE PLACE DECIMAL ±		COMMENTS:		B	MLC-6	
INTERPRET GEOMETRIC TOLERANCING PER:				SCALE: 1:10		WEIGHT:
MATERIAL						SHEET 2 OF 2
FINISH						

PCB heated bed for 3D-printing by Robert Kuhmann Version: RK2

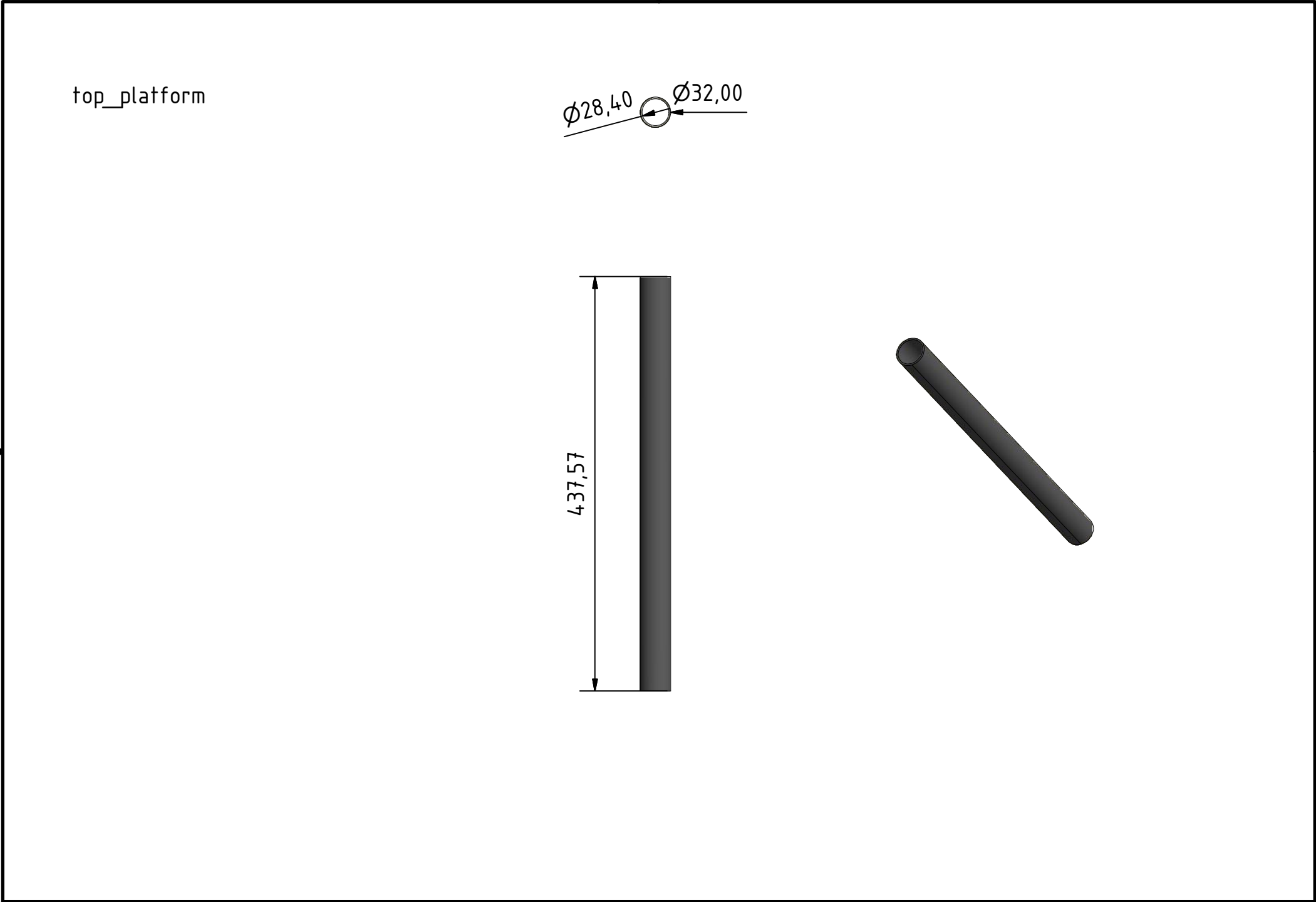


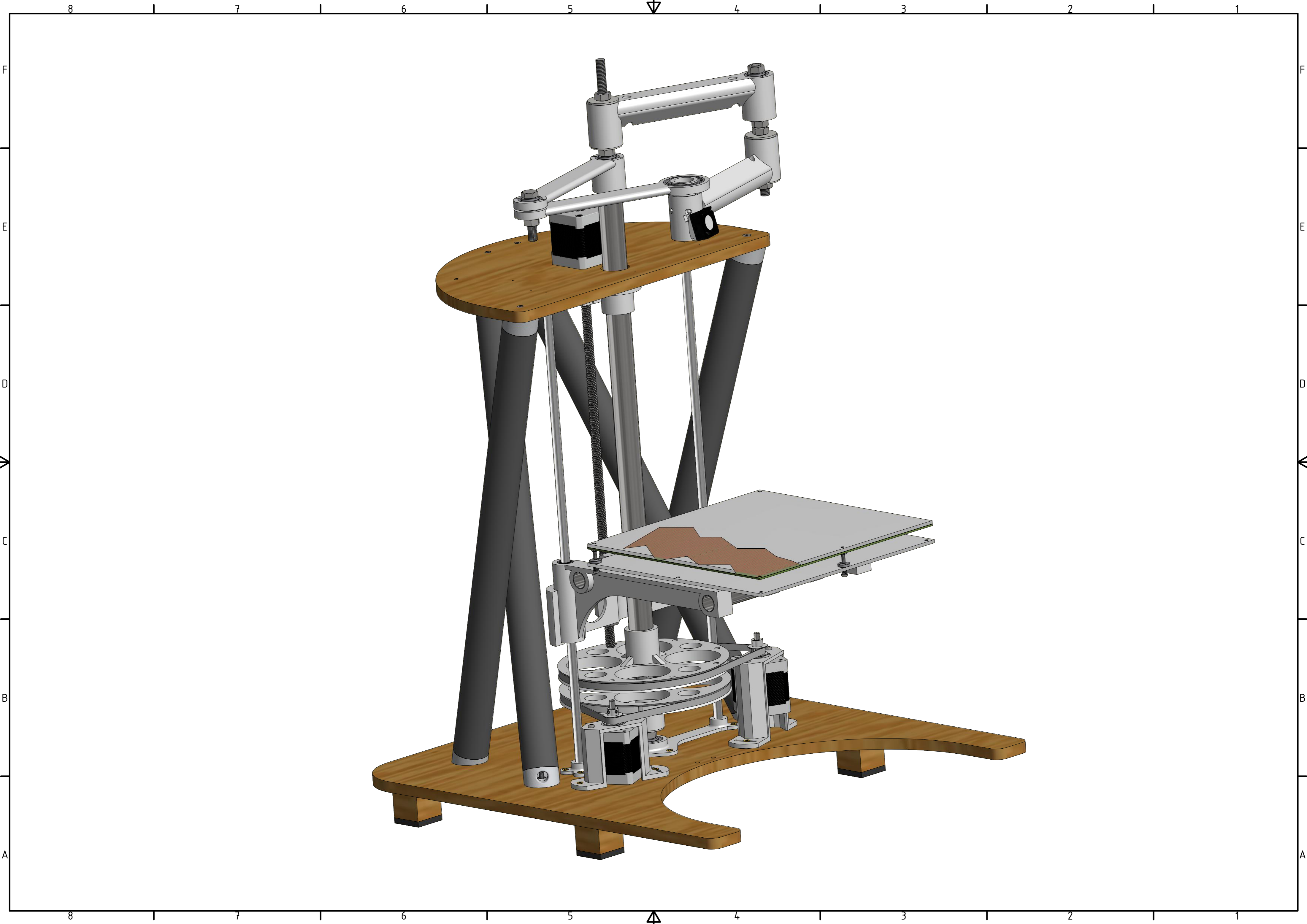


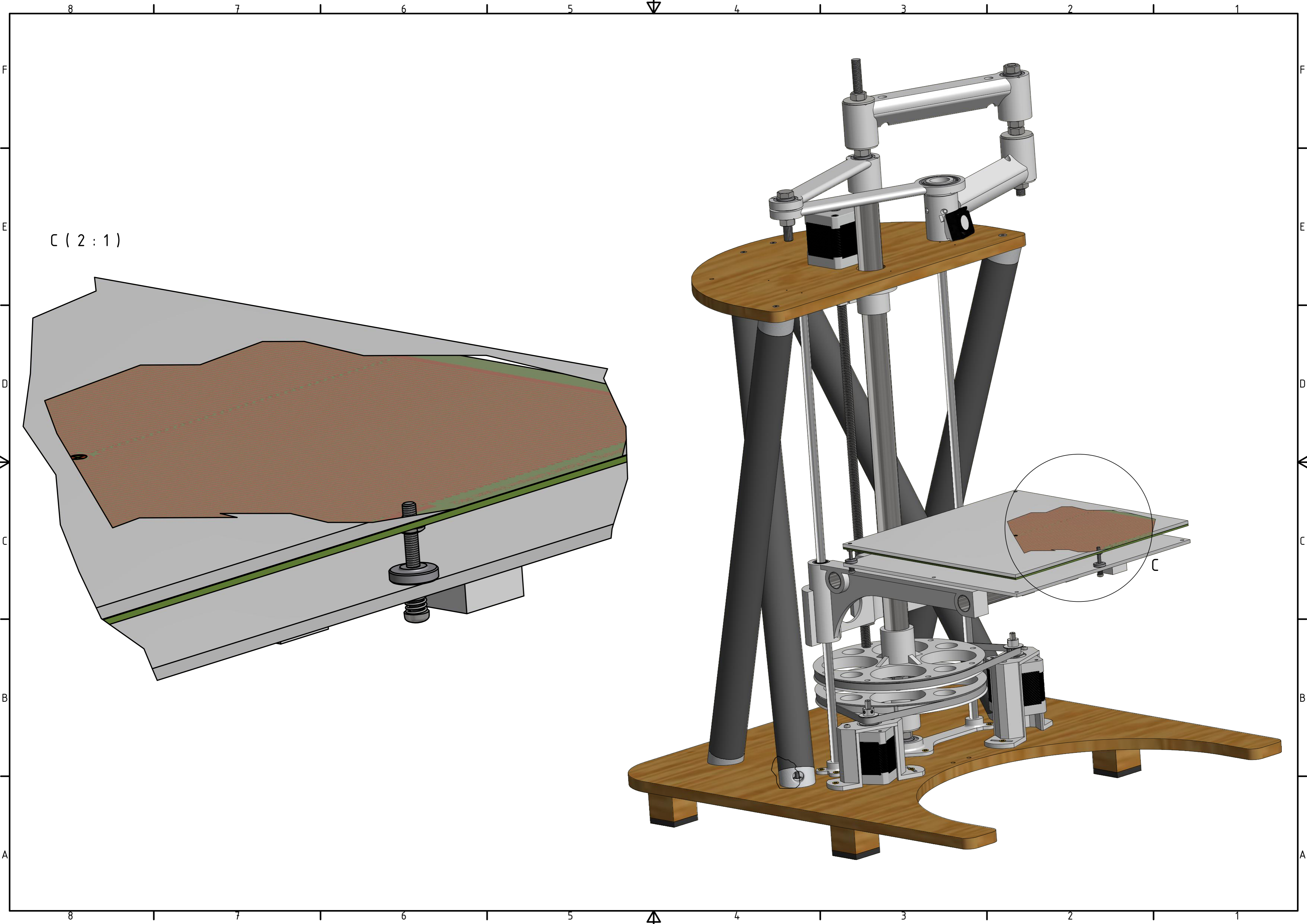
pvc-pipe_a

$\phi 28,40$ $\phi 32,00$

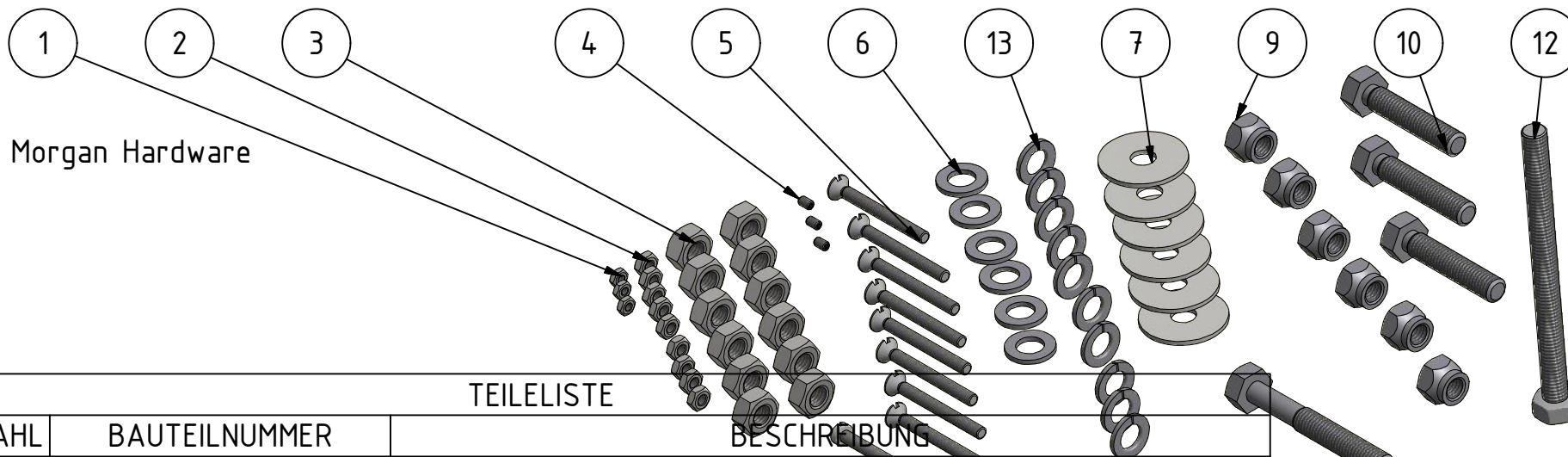
446,92







RepRap Morgan Hardware



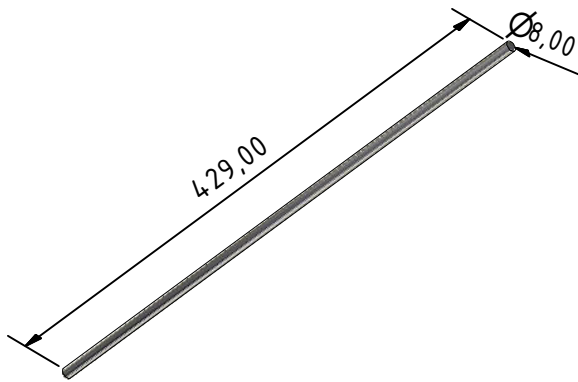
TEILELISTE

OBJEKT	ANZAHL	BAUTEILNUMMER	BESCHREIBUNG
1	3	ISO 4032 - M3	Sechskantmuttern, Typ 1 - Produktklasse A und B
2	9	ISO 4032 - M4	Sechskantmuttern, Typ 1 - Produktklasse A und B
3	12	ISO 4032 - M8	Sechskantmuttern, Typ 1 - Produktklasse A und B
4	3	ANSI B18.3.6M - M3x0,5 x 5	Innensechskant-Gewindestift geschmiedet mit Ringschneide - Form I - Metrisch
5	8	ISO 2009 - M4 x 40	Senkschraube
6	6	DIN 126 - 9	Unterlegscheiben für Sechskantschrauben
7	6	M8 Unterlegscheibe 28mm	
8	1	M4 Schraube 80mm	
9	6	ANSI B18.16.3M - Property Class 9 - Metric M8 x 1.25 Nichtmetallisch	Sechskantmuttern mit Klemmteil - Stahl metrisch - Fertigkeitsklassen 5, 9 und 10
10	3	ANSI B 18.6.7 M / IFI 513 - M8 x 1,25 x 40	Sechskantschraube
11	1	ANSI B 18.6.7 M / IFI 513 - M8 x 1,25 x 60	Sechskantschraube
12	1	M8 Schraube 100mm	
13	10	DIN 128 - A8	Federring

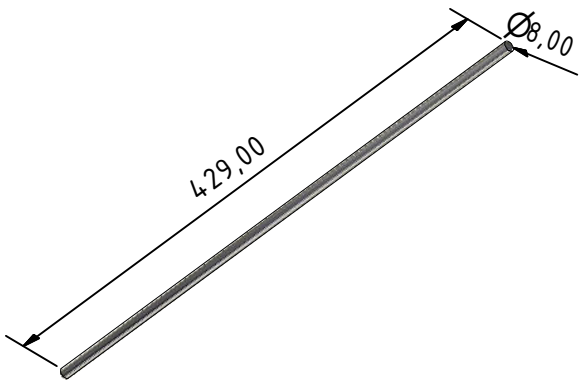
11

8

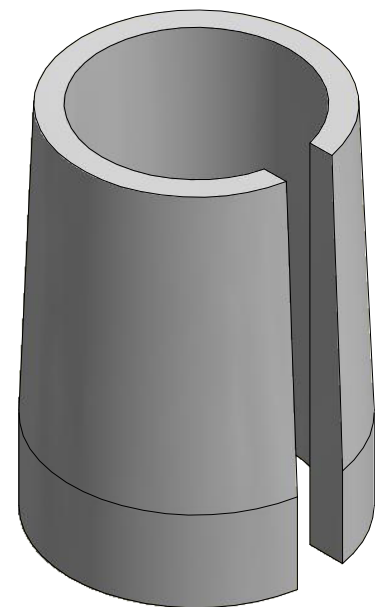
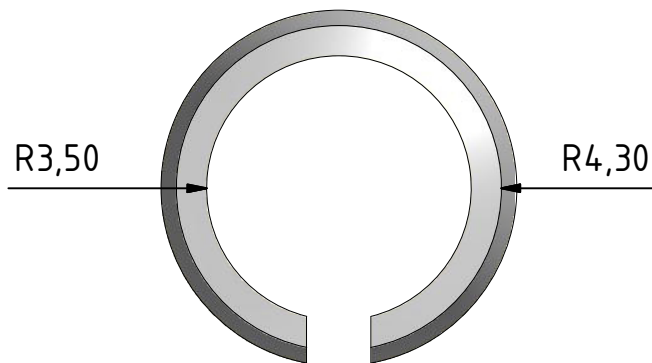
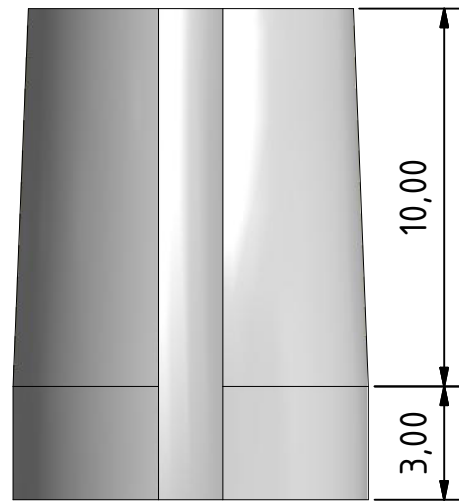
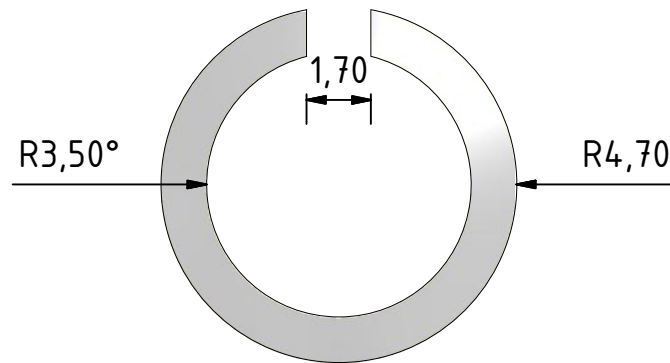
smooth_rod_429mm

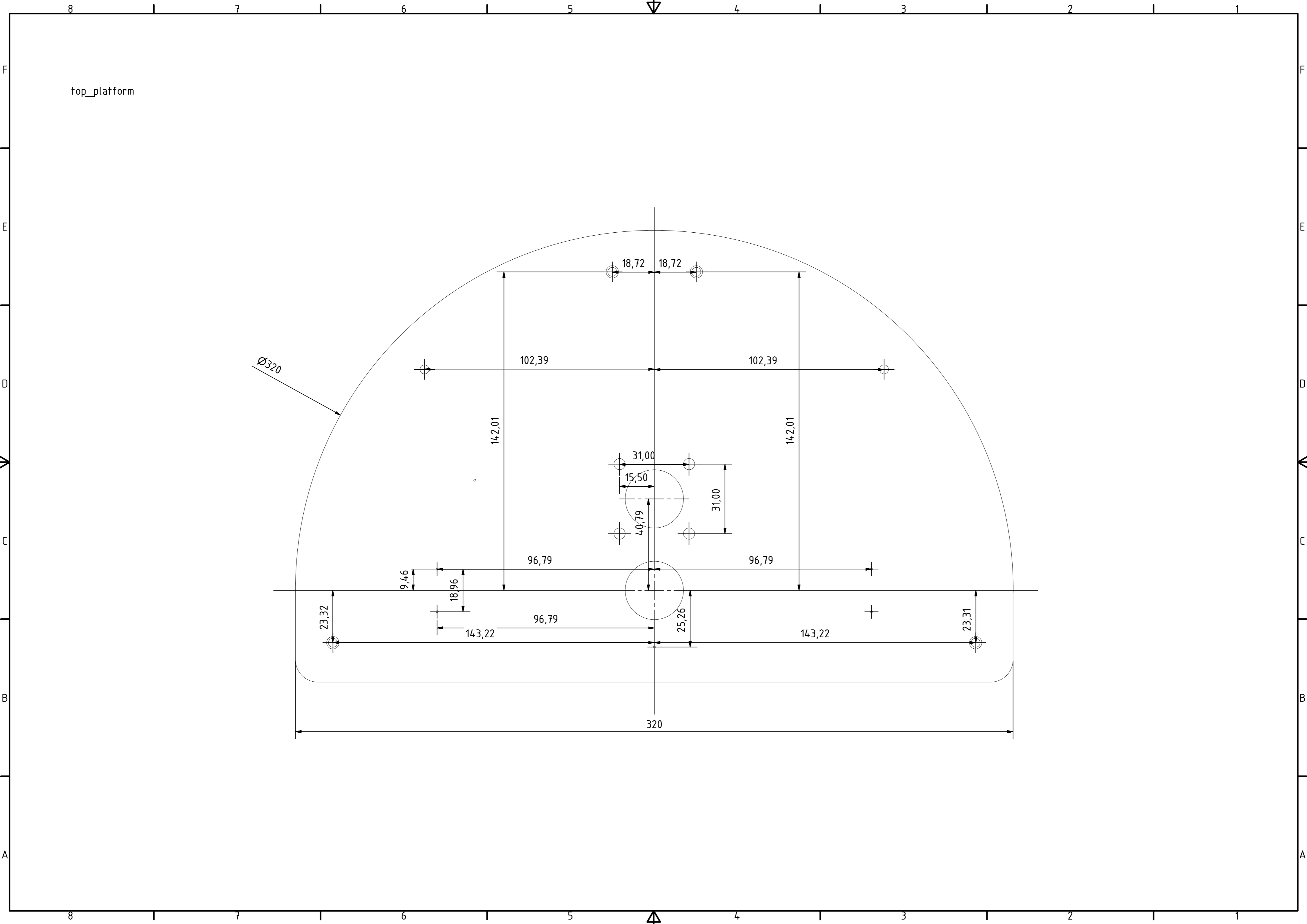


smooth_rod_429mm



tighteningCone_2





top_platform

Ø320

18,72

18,72

102,39

102,39

142,01

142,01

31,00

15,50

31,00

40,79

96,79

96,79

9,46

18,96

23,32

96,79

143,22

25,26

143,22

23,31

320