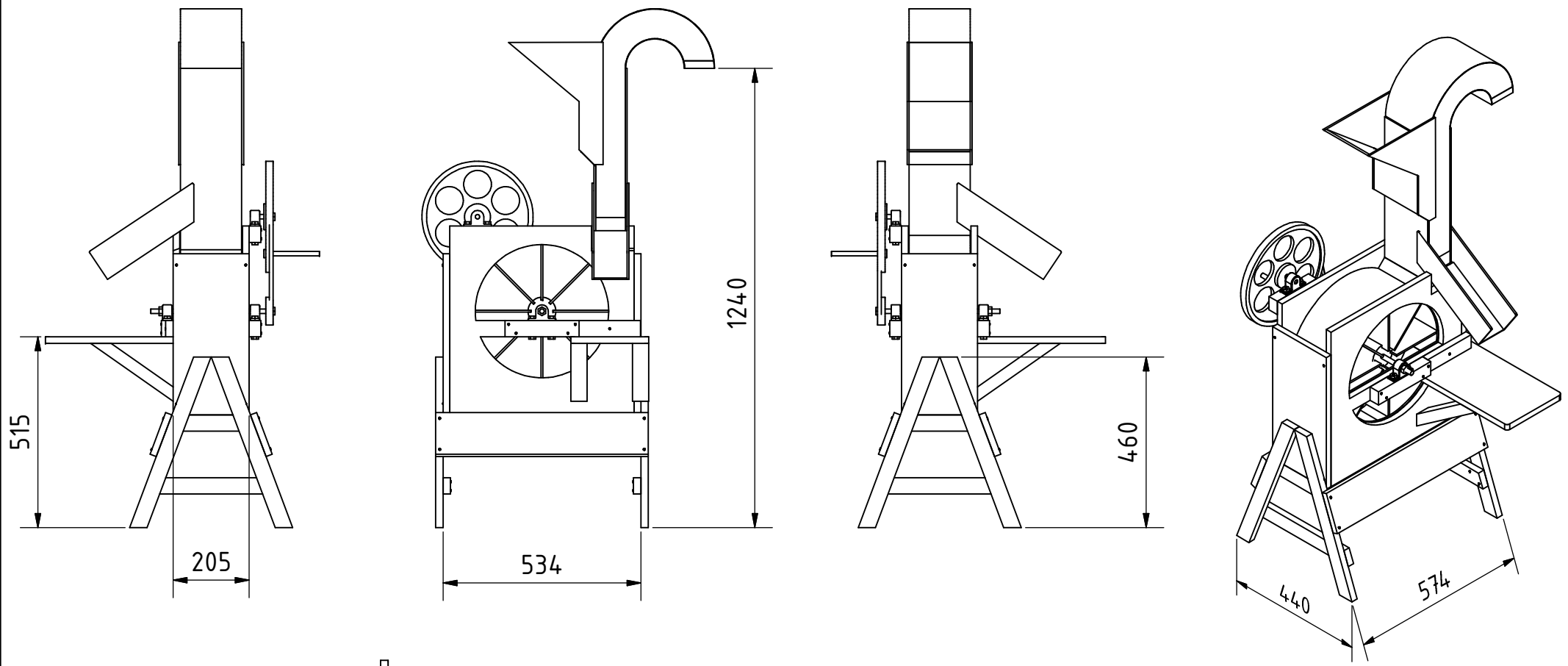
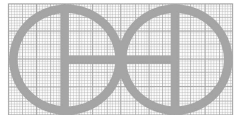


ELEVATION (1 : 15)

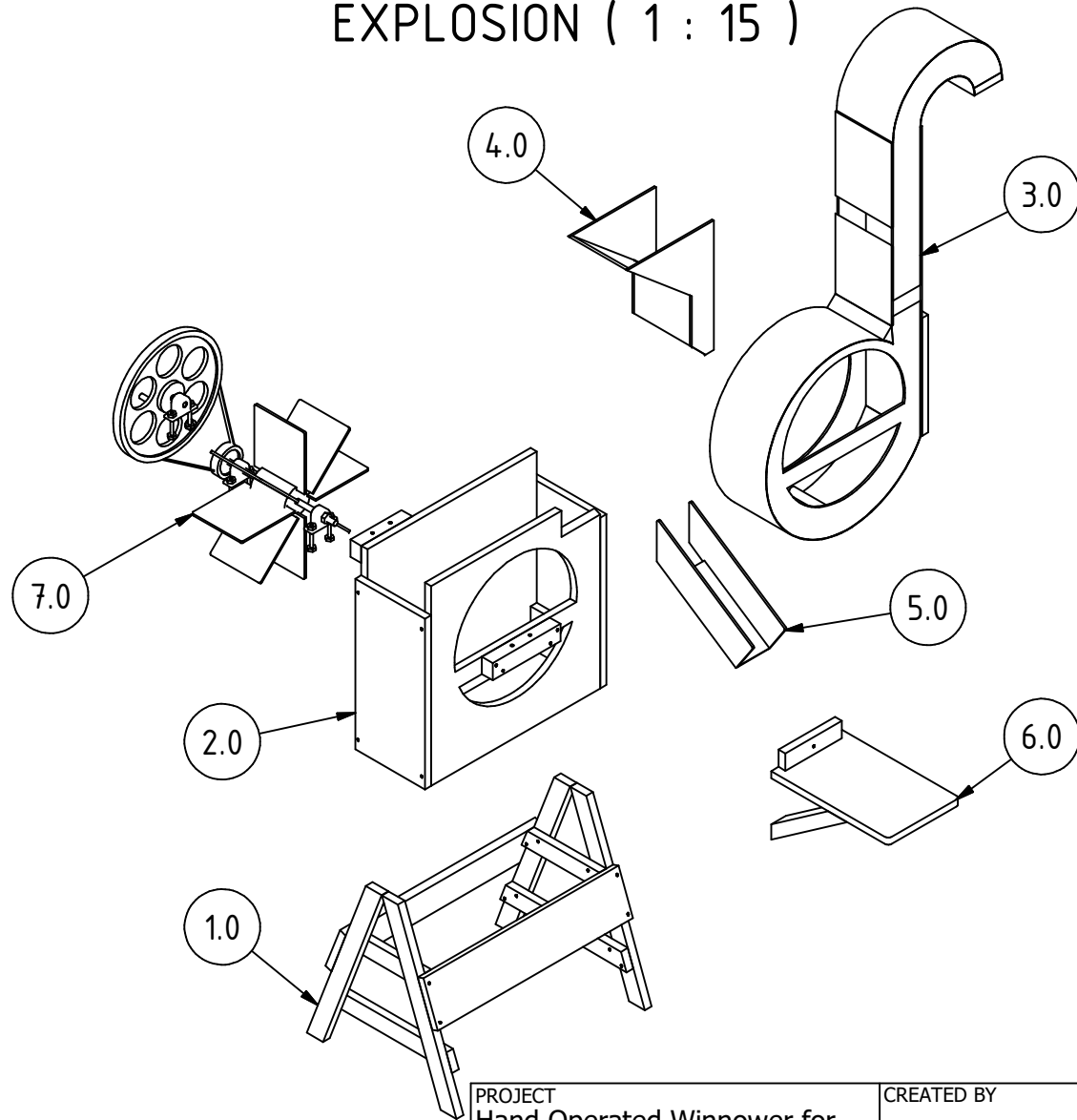


Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME		FILE NAME tpi_how_hand-operated-winnower.iam			POS A1
DEVELOPED BY		REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
Tropical Products Institut		OHO e.V.	Assembly		1
			LICENCE	SCALE	SHEET
			CC-BY-SA 4.0	1:15	1 /45



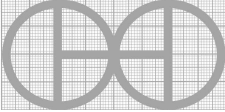
EXPLOSION (1 : 15)



PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Exploded 3d view		FILE NAME tpi_how_hand-operated-winnower.ipn			POS A2
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:15	SHEET 2 /45	

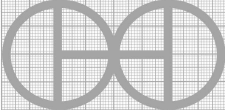
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
A1	-	3d views	tpi_how_hand-operated-winnower.iam	-	-	1
A2	-	Exploded 3d view	tpi_how_hand-operated-winnower.ipn	-	-	2
B1	-	Parts list	tpi_how_hand-operated-winnower.csv	-	-	3-4
C1	-	Technicl notes	-	-	-	5
1.0	-	Saddle	Saddle.ipn	-	-	6
1.1	4	Leg	Leg.ipt	Production	Hardwood 20mm	7
1.2	2	Long side member	Long side member.ipt	Production	Hardwood 20mm	8
1.3	2	Short side member	Short side member.ipt	Production	Hardwood 20mm	9
1.4	2	Side rail	Side rail.ipt	Production	Hardwood 18mm	10
1.5	24	Wood screw	-	Standard	DIN 97 screw 4x35mm	-
2.0	-	Winnower body	Winnower body.ipn	-	-	11
2.1	1	Front panel	Front panel.ipt	Production	Hardwood 18mm	12
2.2	1	Back panel	Back panel.ipt	Production	Hardwood 18mm	13
2.3	2	Side panel	Side panel.ipt	Production	Hardwood 18mm	14
2.4	1	Stop	Stop.ipt	Production	Hardwood 18mm	15
2.5	2	Central mount	Central mount.ipt	Production	Hardwood 32mm	16
2.6	1	End mount	End mount.ipt	Production	Hardwood 32mm	17
2.7	14	Wood screw	-	Standard	DIN 97 screw 4x30mm	-
2.8	32	Wood screw	-	Standard	DIN 97 screw 4x45mm	-
3.0	-	Wind case	Wind case.ipn	-	-	18
3.1	1	Drum body A	Drum body A.ipt	Production	Plywood 5mm	19
3.2	1	Drum body B	Drum body B.ipt	Production	Plywood 5mm	20
3.3	3	Spacer	Spacer.ipt	Production	Hardwood 20mm	21
3.4	1	Drum cover	Drum cover.ipt	Production	1mm thick alum alloy	22
3.5	1	Backing strip	-	Production	Plywood 5mm	23
3.6	1	Stiffener	-	Production	Plywood 18xmm	24
3.7	1	Top board A	-	Production	Plywood 18mm	25
3.8	1	Gusset A	Gusset A	Production	Hardwood 34mm	26
3.9	2	Side board	Side board	Production	Plywood 5mm	27
3.10	1	Top board B	-	Production	Plywood 5mm	28
3.11	2	Gusset B	-	Production	Hardwood 20x8x81 mm	-

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron		APPROVED BY A. Morillo		DATE 09/08/2021		VERSION 1.0	
PART NAME Parts list		FILE NAME tpi_how_hand-operated-winnower.csv						POS B1	
DEVELOPED BY Tropical Products Institut		REDESIGNED BY  OHO e.V.		DOC. TYPE Parts list		MATERIAL LICENCE CC-BY-SA 4.0		QUANTITY SCALE SHEET 3 /45	

Parts list

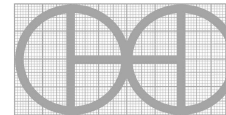
POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
3.12	1	Cover under	Cover under.ipt	Production	1mm thick alum alloy	29
3.13	1	Cover top	Cover top.ipt	Production	1mm thick alum alloy	30
4.0	-	Large grain chute	Large grain chute.ipn	-	-	31
4.1	2	Panel A	Panel A.ipt	Production	Plywood 5mm	32
4.2	1	Panel B	-	Production	Plywood 5mm	33
4.3	1	Panel C	-	Production	Plywood 5mm	34
4.4	1	Panel D	Panel D.ipt	Production	Plywood 5mm	35
5.0	-	Chute	Chute.ipn	-	-	36
5.1	2	Panel A	Panel A.ipt	Production	Plywood 5mm	37
5.2	1	Panel B	-	Production	Plywood 5mm	38
6.0	-	Table	Table.ipn	-	-	39
6.1	1	Table	Table.ipt	Production	Hard wood 18mm	40
6.2	1	Back block	Back block.ipt	Production	Hard wood 20x44mm	41
6.3	2	Leg	Leg.ipt	Production	Hard wood 32x44mm	42
6.4	5	Wood screw	-	Standard	DIN 97 screw 4x35mm	-
7.0	-	Fan components	Fan components.ipn	-	-	43
7.1	1	Body	Body.ipt	Production	Hard wood 75mm	44
7.2	8	Blade	Blade.ipt	Production	Hard wood 5mm	45
7.3	1	Pin	-	Production	Steel C45 12x148mm	-
7.4	1	Pulley wheel 300 mm	-	Buy	12mm single groove fixed hole pulley, cast iron 300mm	-
7.5	1	Pulley wheel 75 mm	-	Buy	12mm single groove fixed hole pulley, cast iron 75mm	-
7.6	1	Short shaft	-	Production	Steel C45 12x95mm	-
7.7	1	Main shaft	-	Production	Steel C45 12x140mm	-
7.8	1	Back stop	-	Standard	DIN 431 nut hex 12mm	-
7.9	1	Socket screw	-	Standard	DIN 912 M10x25mm	-
7.10	3	Pillow block	-	Buy	Pillow block bearing, 12mm bore diameter, cast iron	-
7.11	6	Stud	-	Standard	DIN 553 M8x85mm	-
7.12	12	Nut	-	Standard	DIN 439 Nut M8	-
7.13	1	Belt	-	Buy	Belt 12mm DIN 7721 length 1188mm	-

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Parts list		FILE NAME tpi_how_hand-operated-winnower.csv			POS B1
DEVELOPED BY Tropical Products Institut		REDESIGNED BY  OHO e.V.	DOC. TYPE Parts list	MATERIAL LICENCE CC-BY-SA 4.0	QUANTITY SCALE SHEET 4 /45

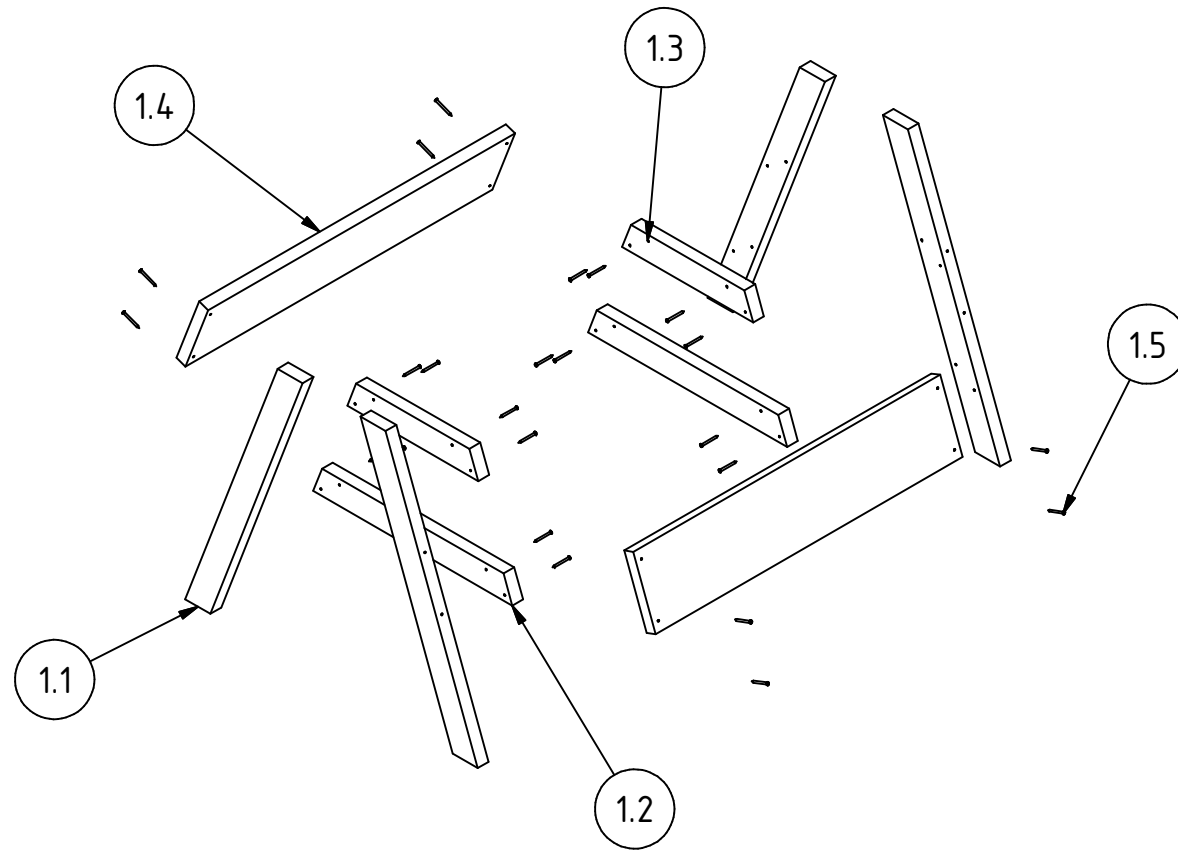
TECHNICAL NOTES

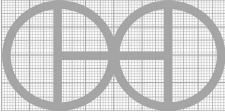
NOTES	CONTENT
GENERAL NOTES	
Wood treatment	<ul style="list-style-type: none"> - The wood must be treated with pesticides and kiln-dried to ensure adequate humidity. - Wood sealer should be applied for later use. - Use white glue to join the pieces before screwing and nailing.
Others	- The winnower was designed for use with a hand-operated sunflower seed decorticator, it forces the air into the wind case, expelling the seed hull.

PROJECT Hand Operated Winnower for groundnut	CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Technical notes	FILE NAME			POS C1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Technical notes	MATERIAL	QUANTITY
		LICENCE CC-BY-SA 4.0	SCALE	SHEET 5 /45

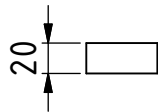
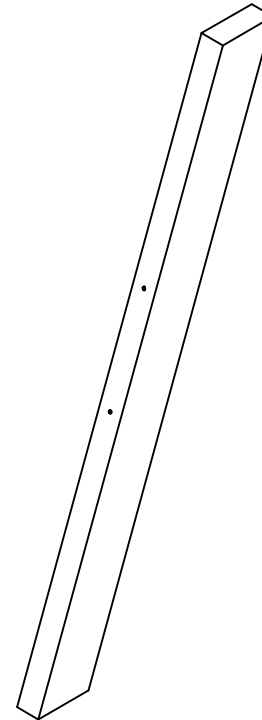
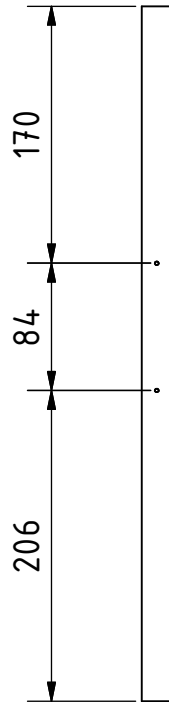
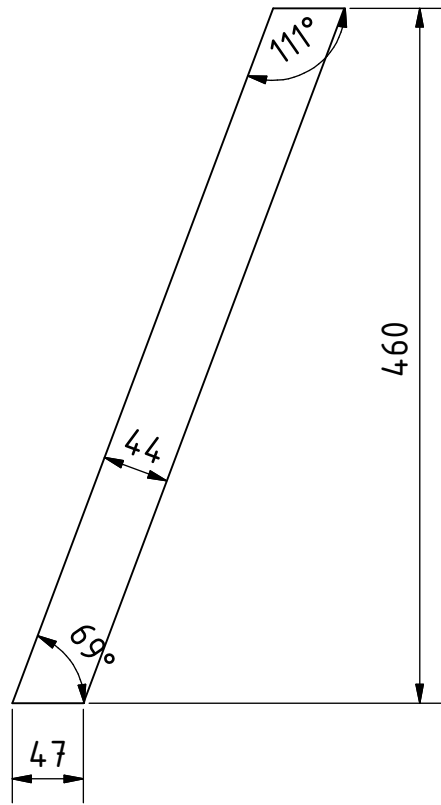


EXPLOSION (1 : 10)



PROJECT Hand Operated Winnowing for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Saddle		FILE NAME Saddle.ipn			POS 1.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
		Assembly		1	
Tropical Products Institut	OHO e.V.	LICENCE CC-BY-SA 4.0	SCALE 1:10	SHEET 6 /45	

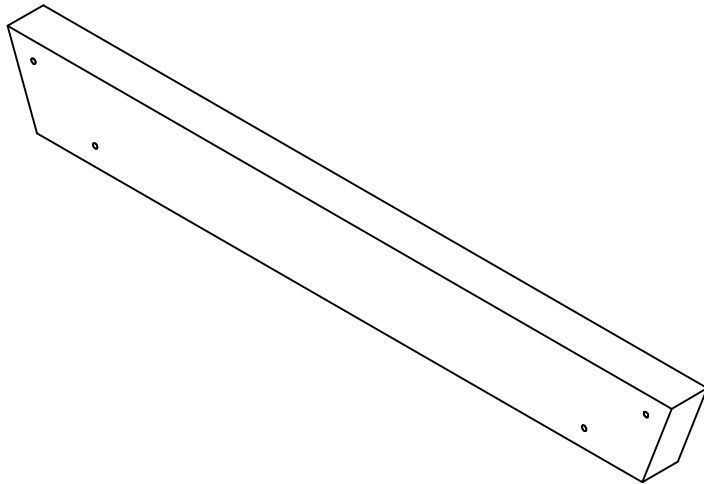
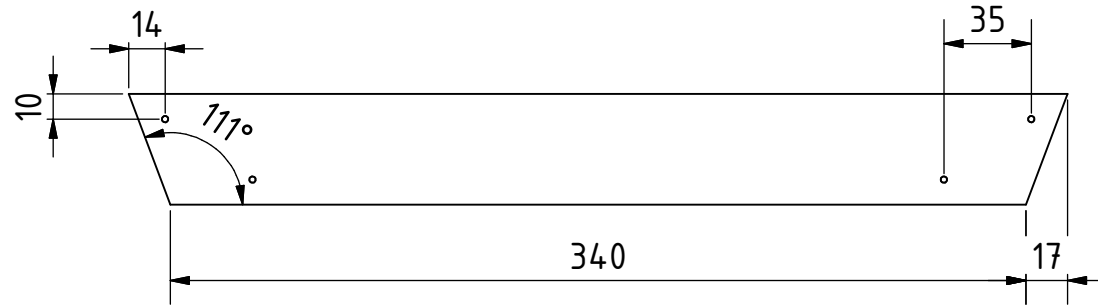
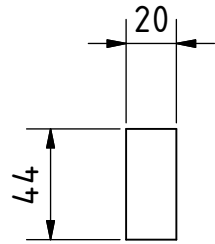
ELELATION (1 : 5)



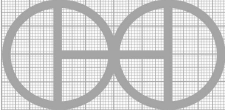
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Leg		FILE NAME Leg.ipt			POS 1.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 4	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 7 /45	

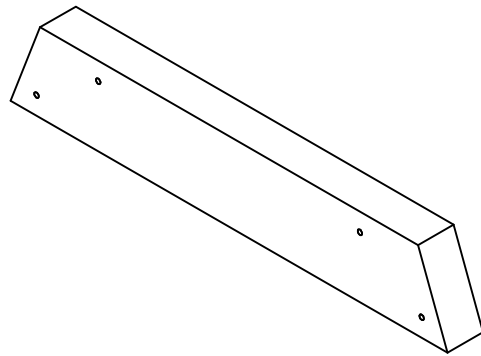
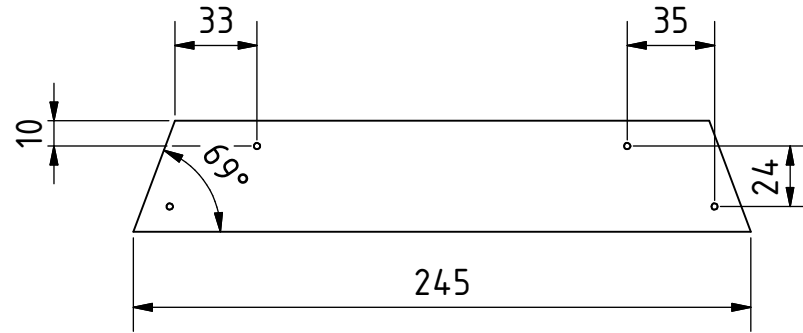
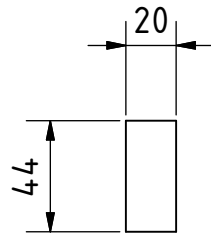
ELEVATION (1 : 3)



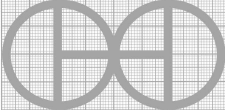
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Long side member		FILE NAME Long side member.ipt			POS 1.2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
		Part	Hard wood	2	
Tropical Products Institut	OHO e.V.	LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 8 /45	

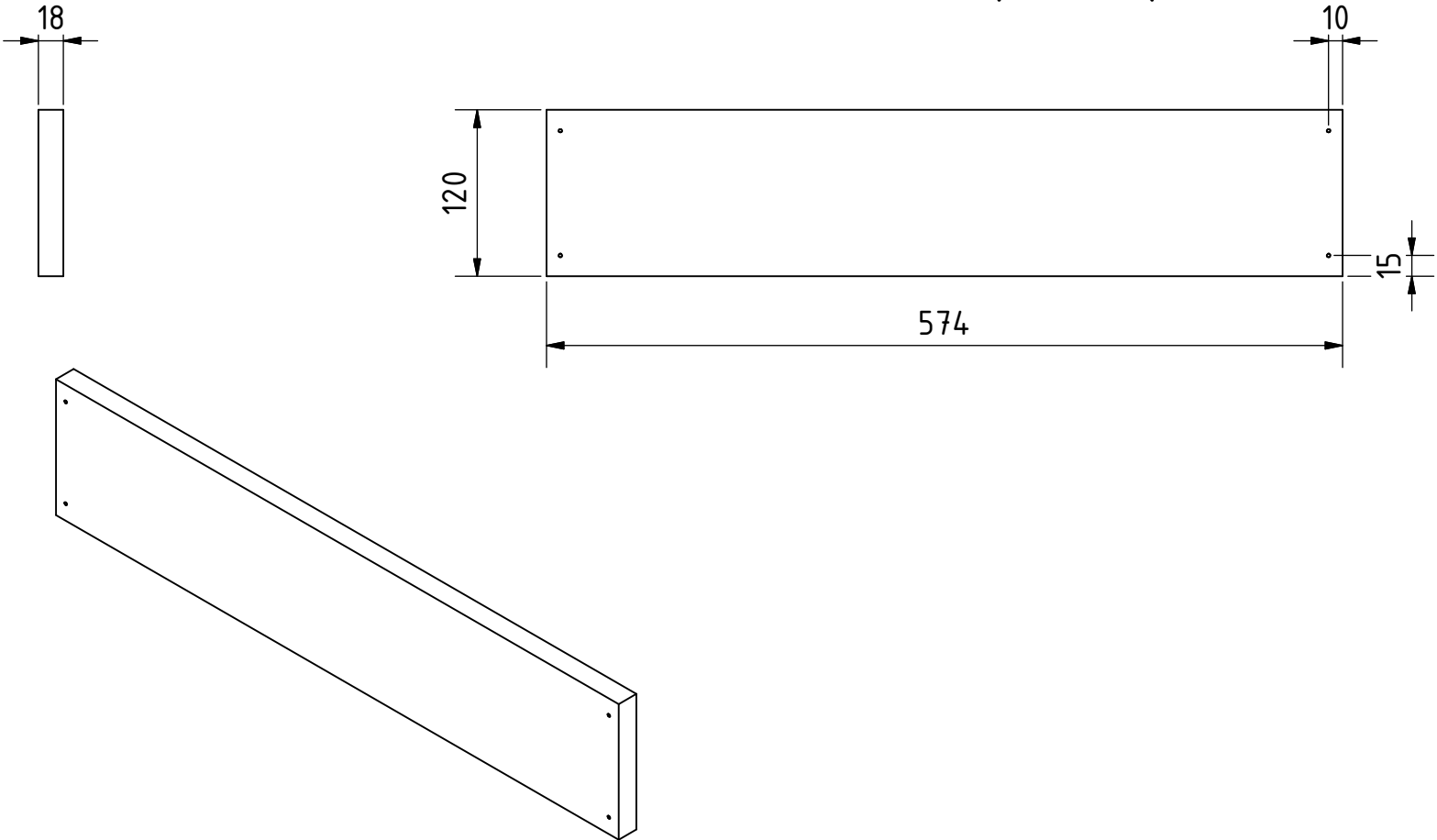
ELEVATION (1 : 3)



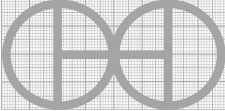
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Short side member		FILE NAME Short side member.ipt			POS 1.3
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
		Part	Hard wood	2	
Tropical Products Institut	OHO e.V.	LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 9 /45	

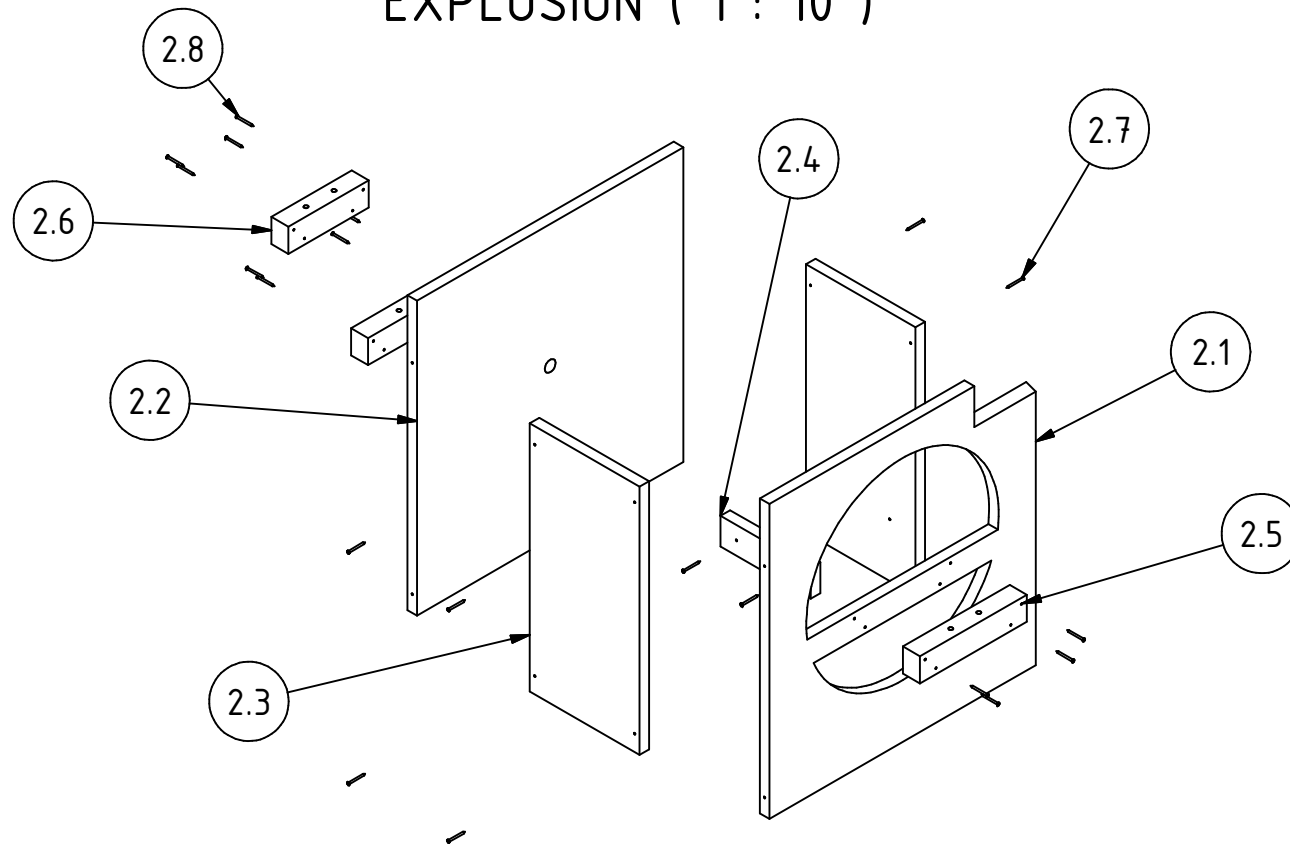
ELEVATION (1 : 5)



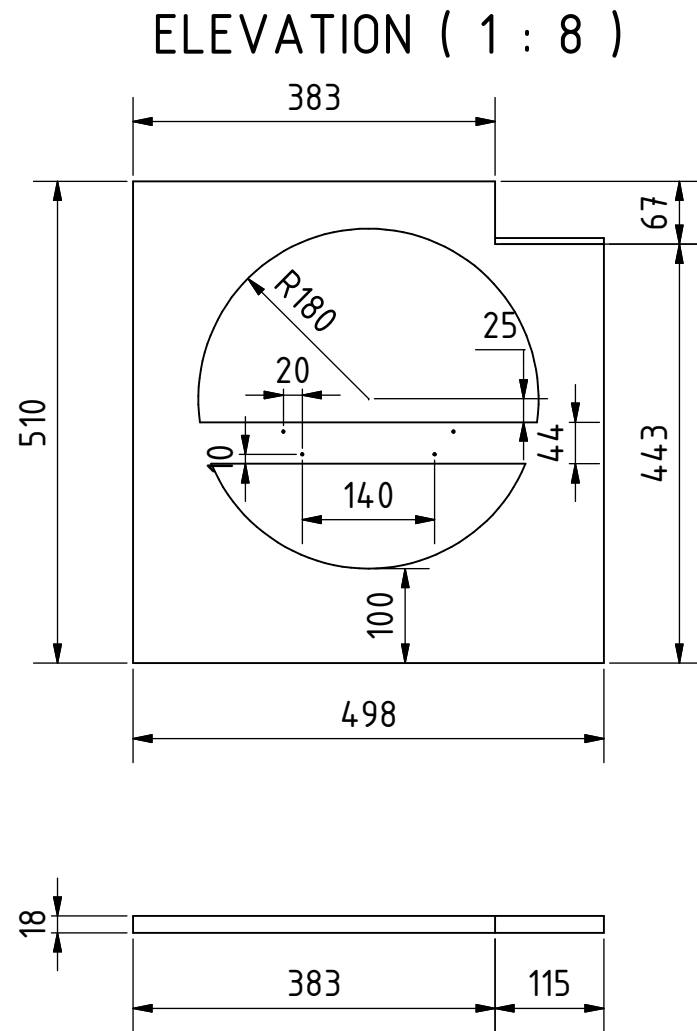
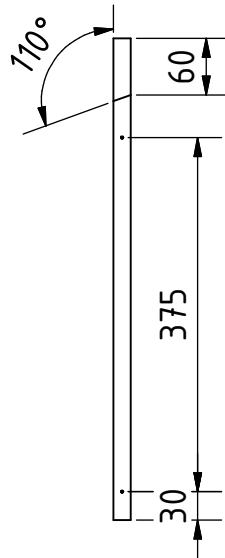
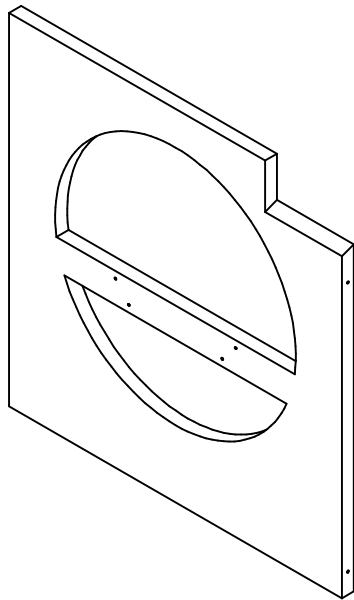
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Side rail		FILE NAME Side rail.ipt			POS 1.4
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
Tropical Products Institut	OHO e.V.		Part	Hard wood	2
			LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:5	10 /45	

EXPLOSION (1 : 10)

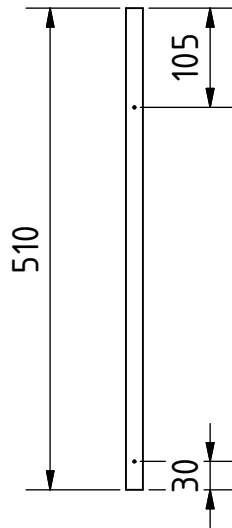
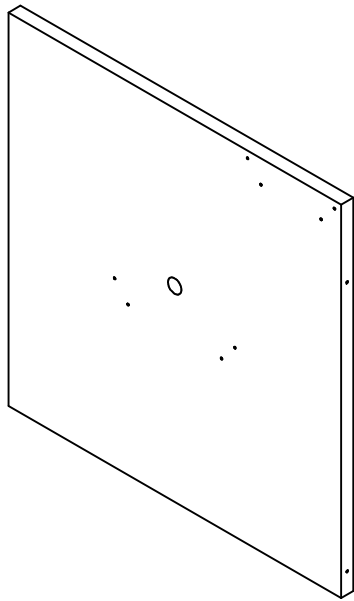


PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Winnower body		FILE NAME Winnower body.ipn			POS 2.0
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:10	SHEET 11 /45	

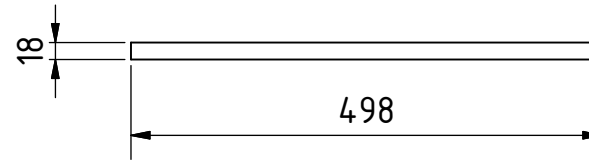
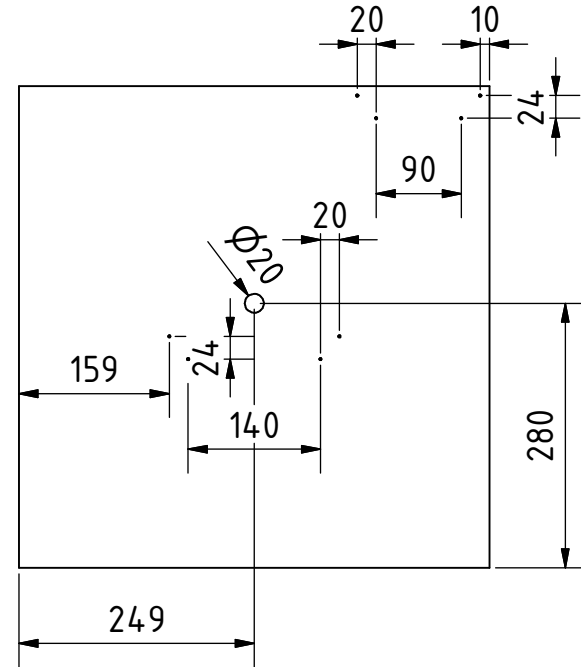


Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Front panel		FILE NAME Front panel.ipt			POS 2.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 12 /45	



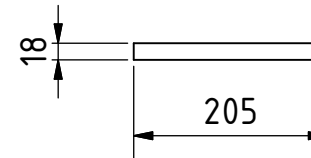
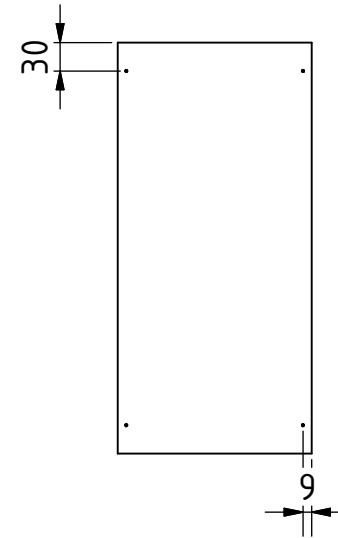
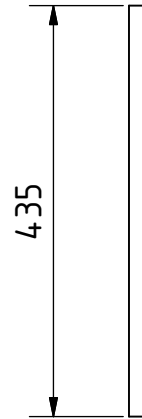
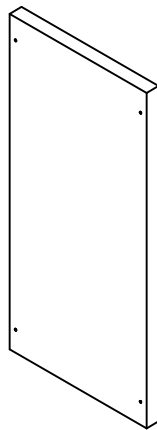
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Back panel		FILE NAME Back panel.ipt			POS 2.2
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 13 /45	

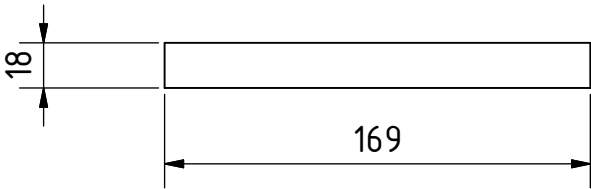
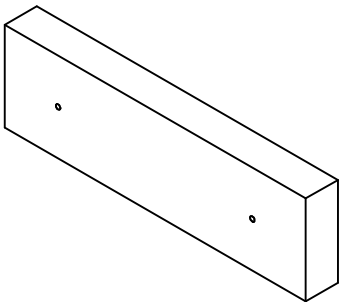
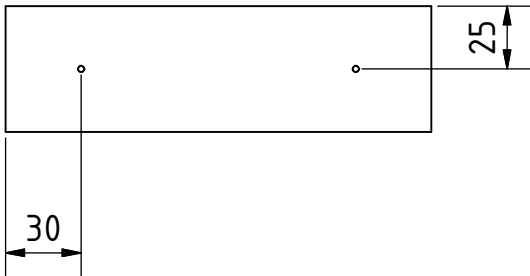
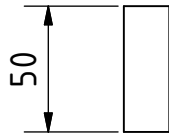
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Side panel		FILE NAME Side panel.ipt			POS 2.3
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 14 /45	

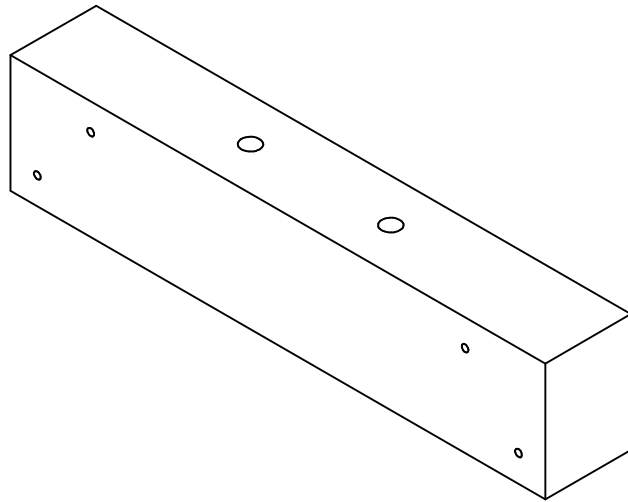
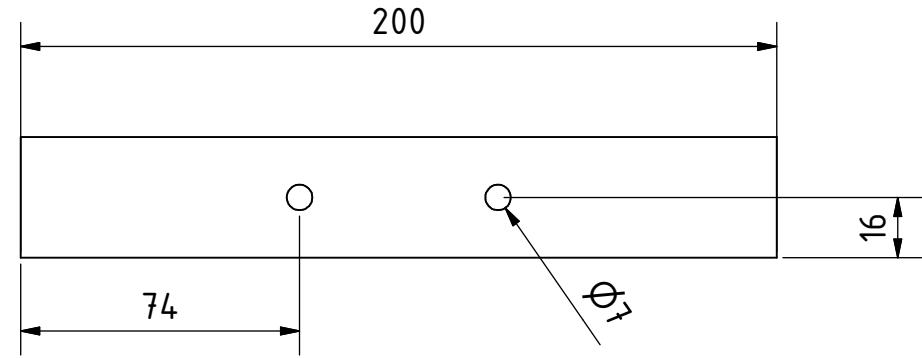
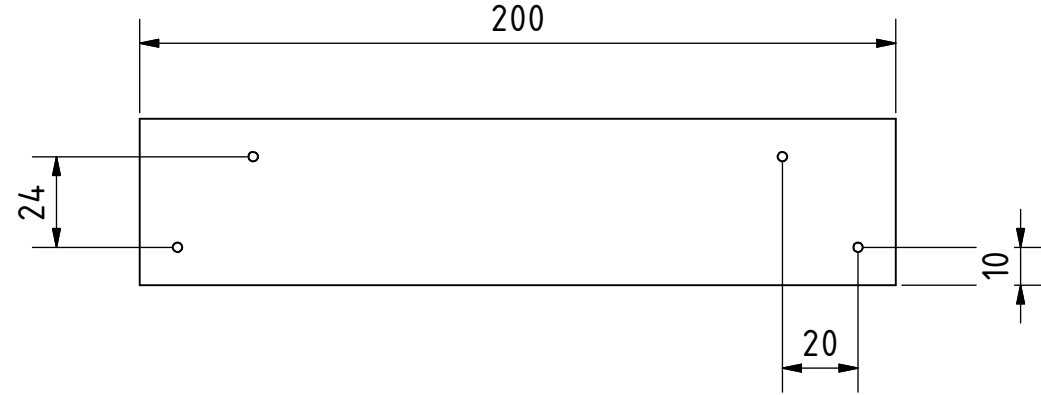
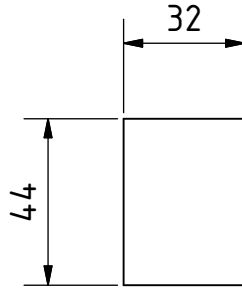
ELEVATION (1 : 3)



Note: All units in mm.

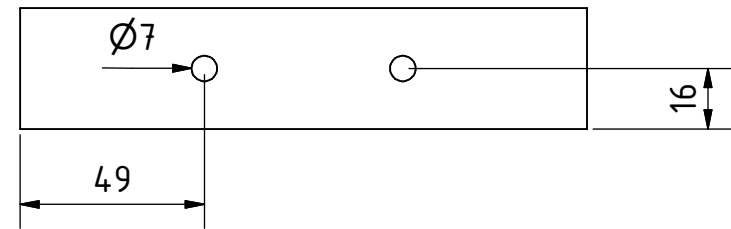
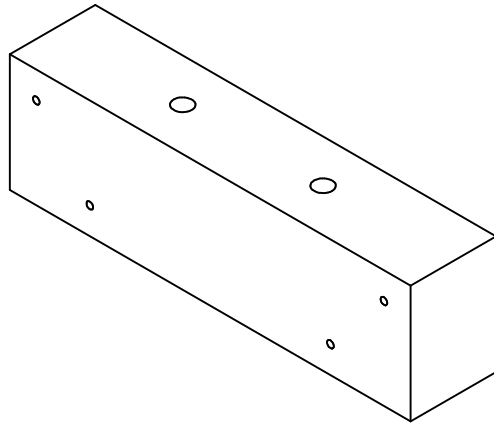
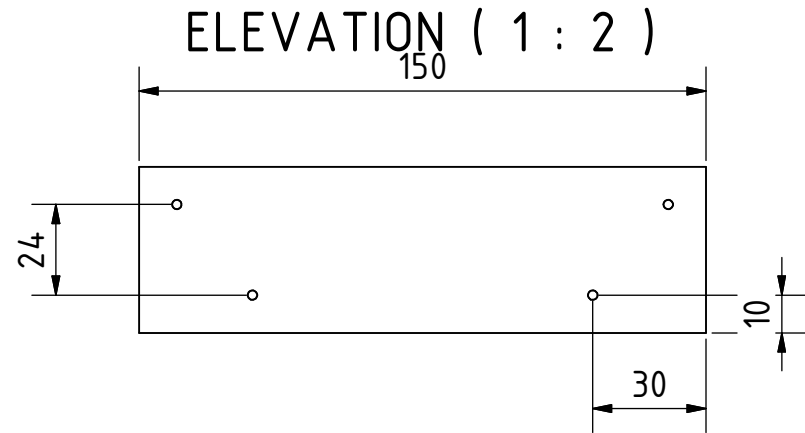
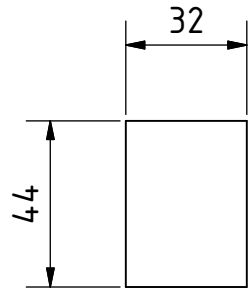
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Stop		FILE NAME Stop.ipt			POS 2.4
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 15 /45	

ELEVATION (1 : 2)



Note: All units in mm.

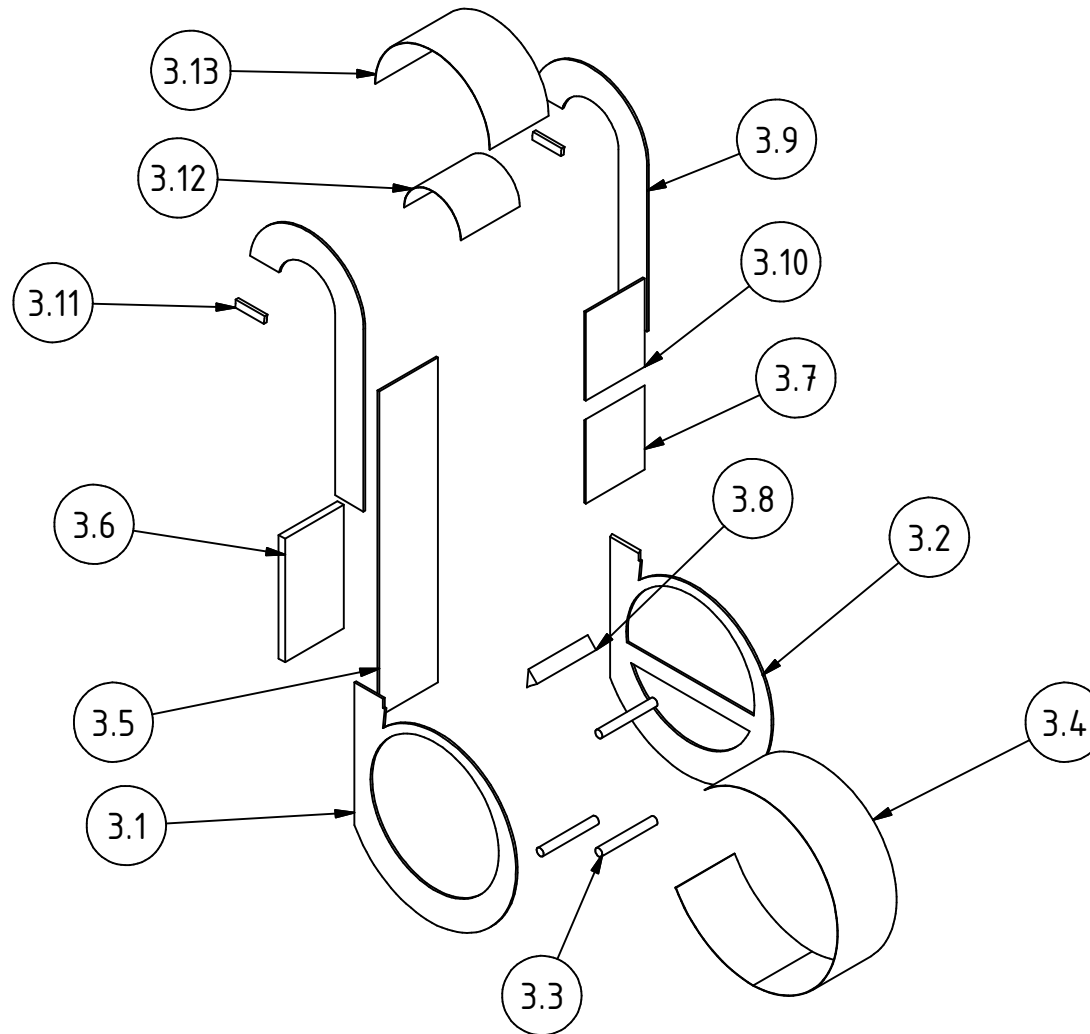
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Central mount		FILE NAME Central mount.ipt			POS 2.5
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:2	SHEET 16 /45	

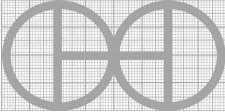


Note: All units in mm.

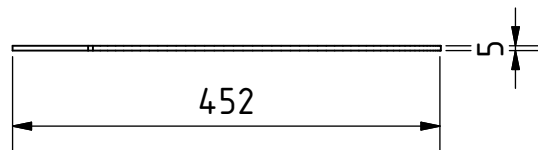
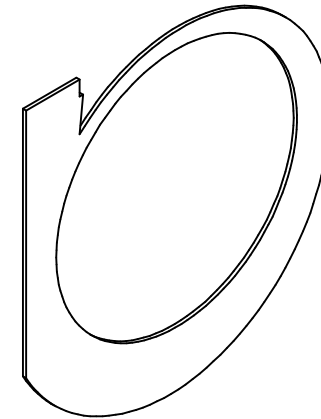
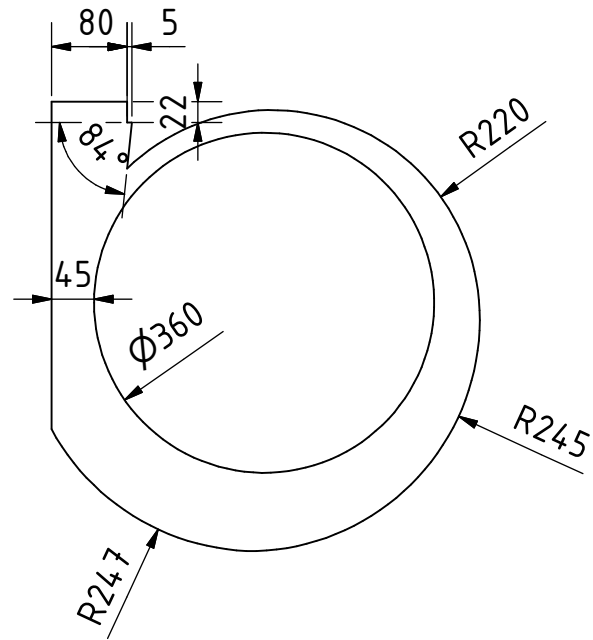
PROJECT Hand Operated Winnower for groundnut	CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME End mount	FILE NAME End mount.ipt			POS 2.6
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1
		LICENCE CC-BY-SA 4.0	SCALE 1:2	SHEET 17 /45

EXPLOSION (1 : 15)



PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron		APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Wind case		FILE NAME Wind case.ipn				POS 3.0
DEVELOPED BY		REDESIGNED BY 		DOC. TYPE Assembly	MATERIAL	QUANTITY 1
Tropical Products Institut		OHO e.V.		LICENCE CC-BY-SA 4.0	SCALE 1:15	SHEET 18 /45

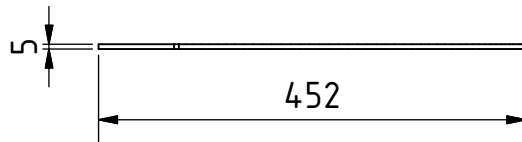
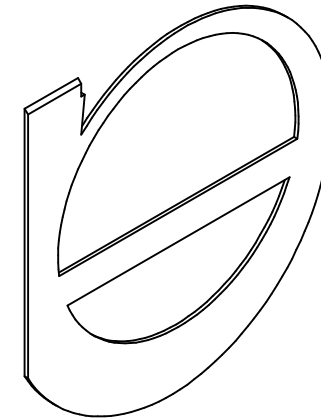
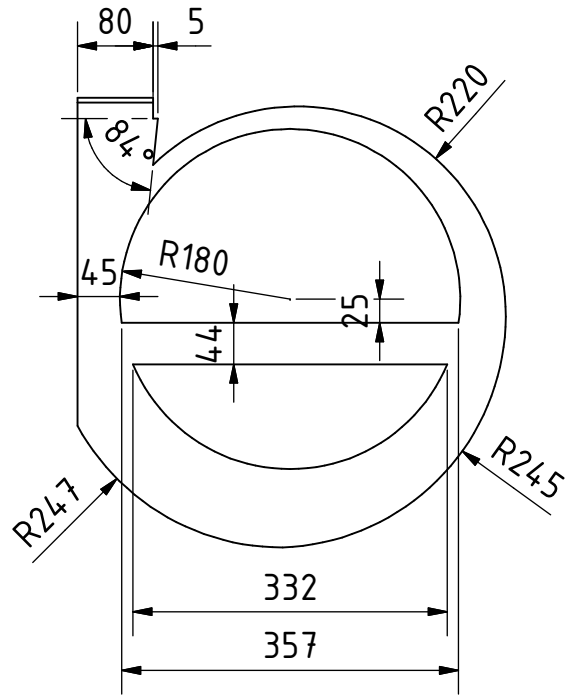
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Drum body A		FILE NAME Drum body A.ipt			POS 3.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 19 /45	

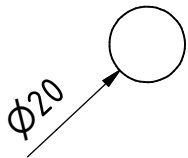
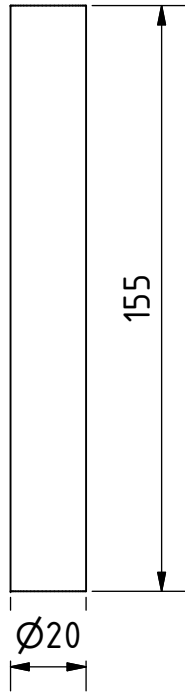
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron		APPROVED BY A. Morillo		DATE 09/08/2021		VERSION 1.0		
PART NAME Drum body B		FILE NAME Drum body B.ipt							POS 3.2	
DEVELOPED BY Tropical Products Institut		REDESIGNED BY OHO e.V.		DOC. TYPE Part		MATERIAL Plywood		QUANTITY 1		
				LICENCE CC-BY-SA 4.0		SCALE 1:8		SHEET 20 /45		

PLAN (1 : 2)

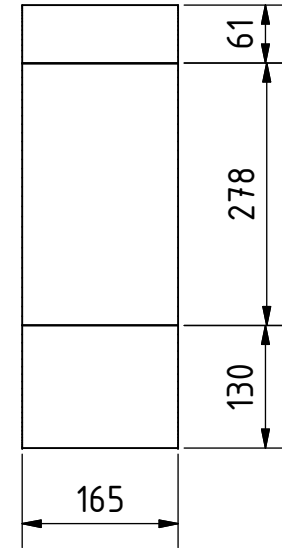
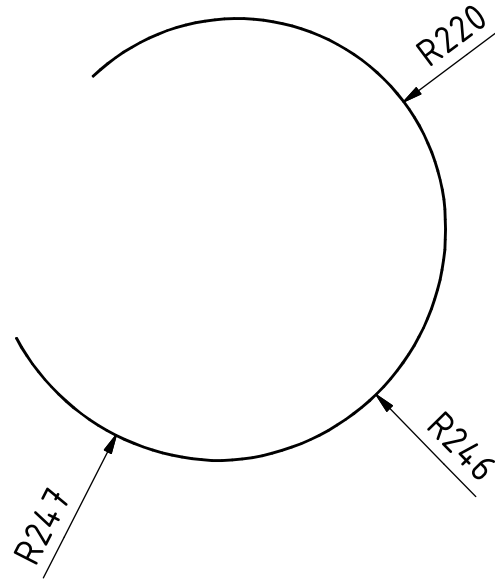
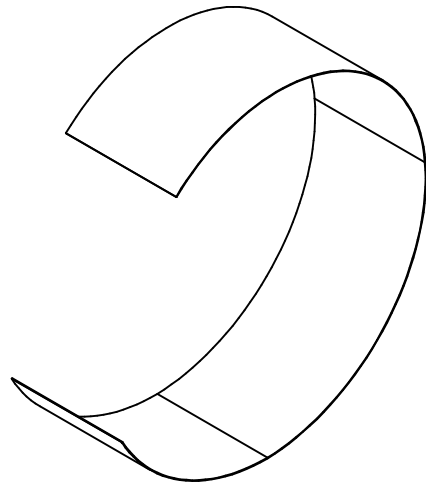


Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Spacer		FILE NAME Spacer.ipt			POS 3.3
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 3	
		LICENCE CC-BY-SA 4.0	SCALE 1:2	SHEET 21 /45	



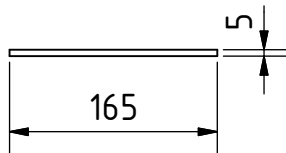
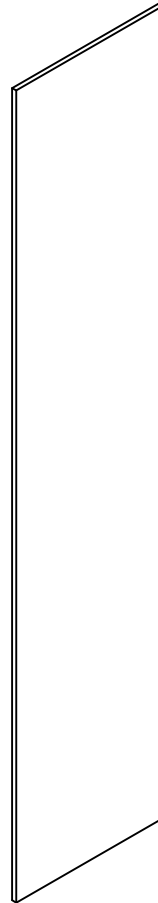
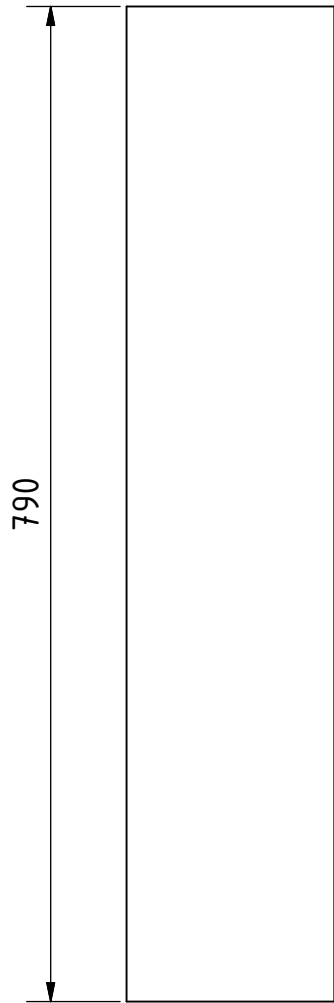
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Drum Cover		FILE NAME Drum Cover.ipt			POS 3.4
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL 1mm thick alum alloy	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 22 /45	

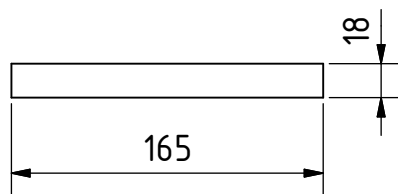
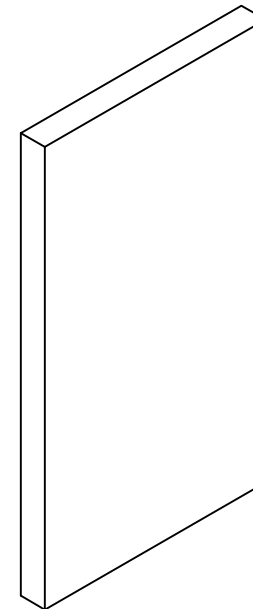
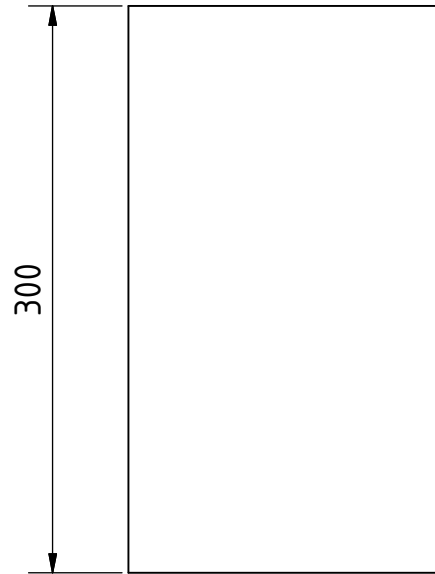
ELEVATION (1 : 6)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Backing strip		FILE NAME Backing strip.ipt			POS 3.5
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:6	SHEET 23 /45	

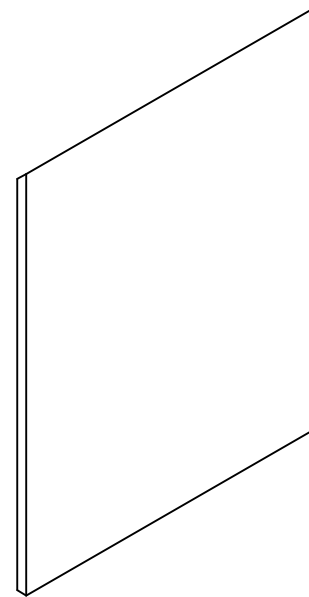
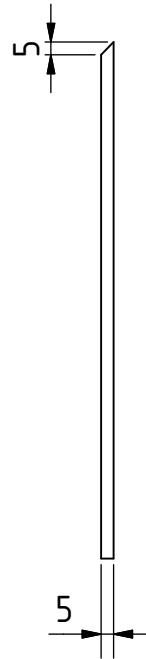
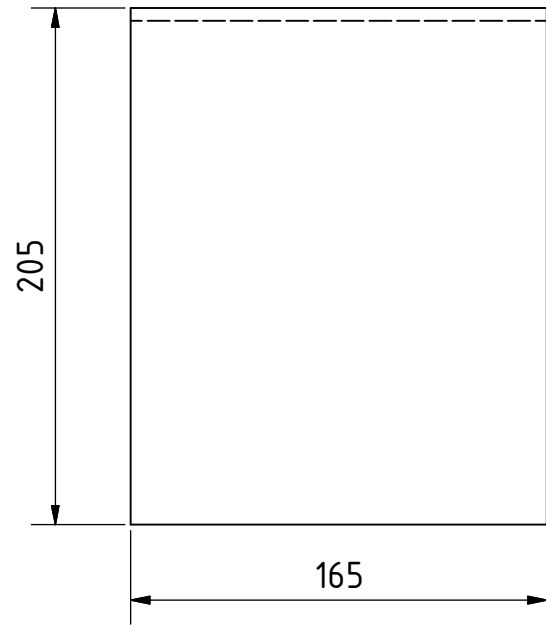
ELEVATION (1 : 4)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Stiffener		FILE NAME Stiffener.ipt			POS 3.6
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:4	SHEET 24 /45	

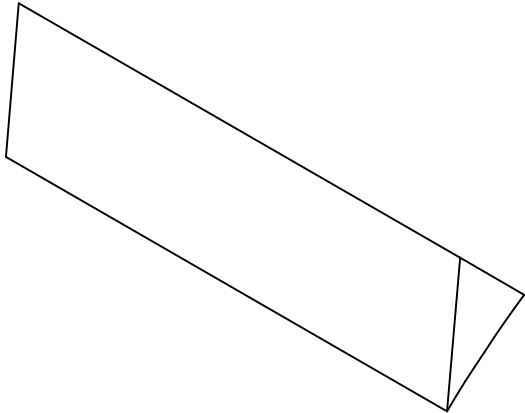
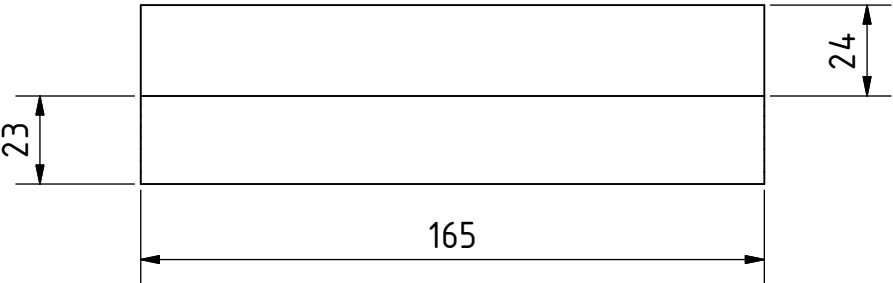
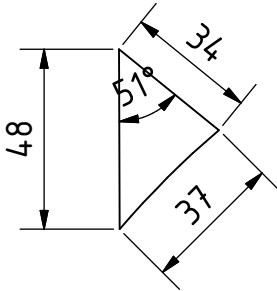
ELEVATION (1 : 3)



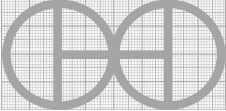
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Top board A		FILE NAME Top board A.ipt			POS 3.7
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 25 /45	

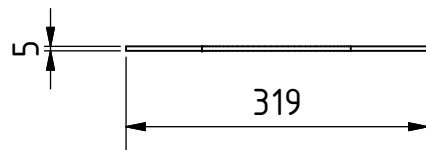
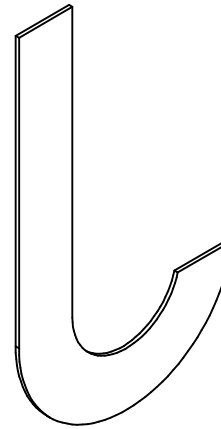
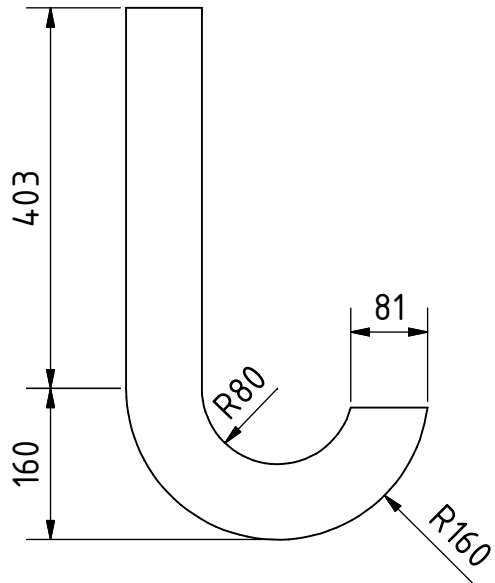
PLAN (1 : 2)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Gusset A		FILE NAME Gusset A.ipt			POS 3.8
DEVELOPED BY Tropical Products Institut	REDESIGNED BY 		DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1
	OHO e.V.		LICENCE CC-BY-SA 4.0	SCALE 1:2	SHEET 26 /45

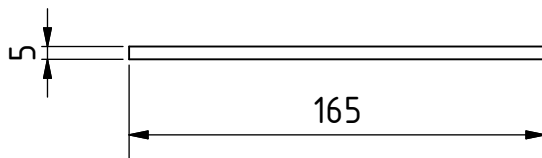
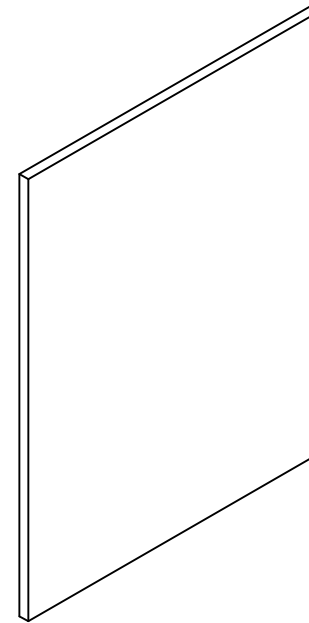
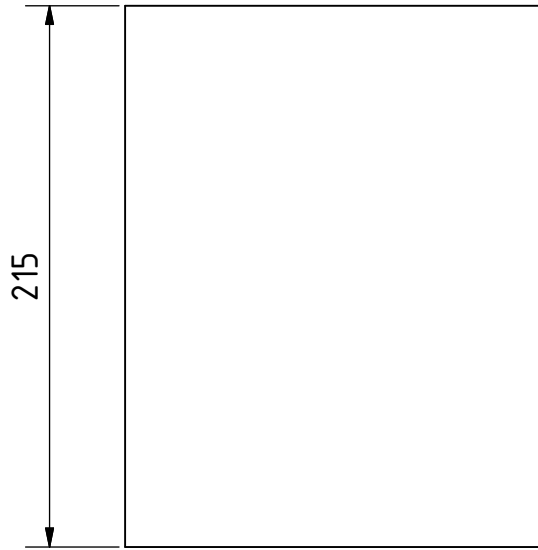
ELEVATION (1 : 8)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Side board		FILE NAME Side board.ipt			POS 3.9
DEVELOPED BY Tropical Products Institut		REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 2
			LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 27 /45

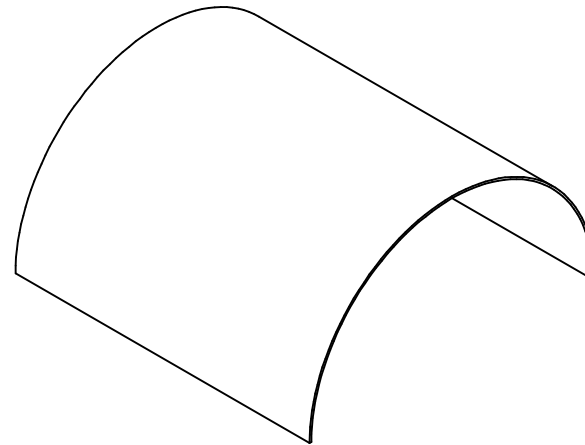
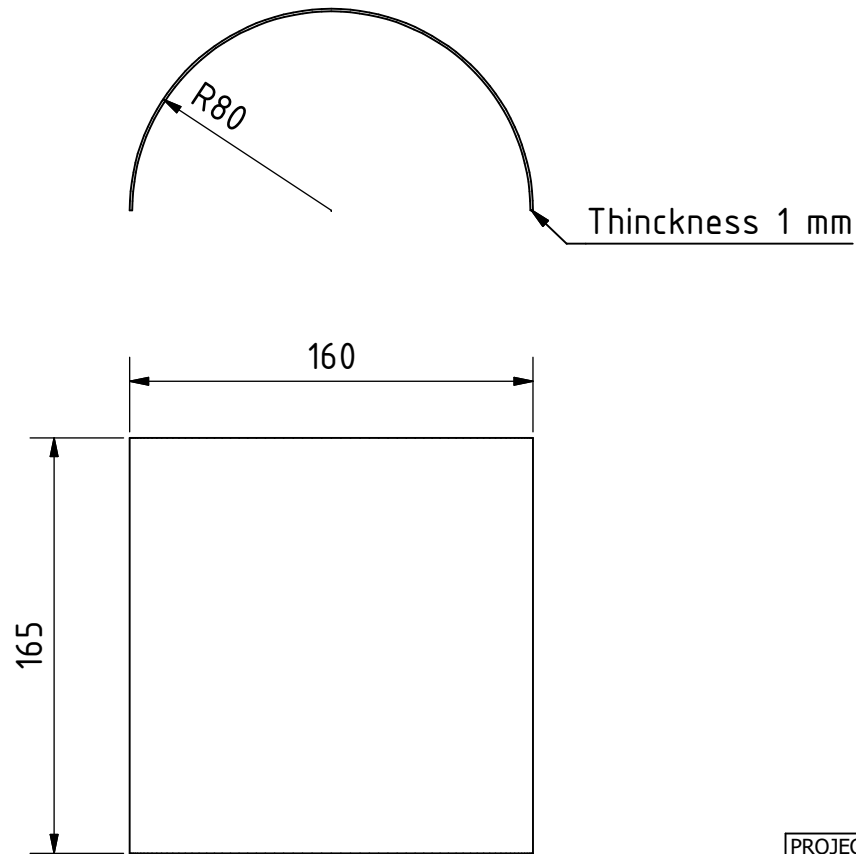
ELEVATION (1 : 3)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Top board B		FILE NAME Top board B.ipt			POS 3.10
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 28 /45	

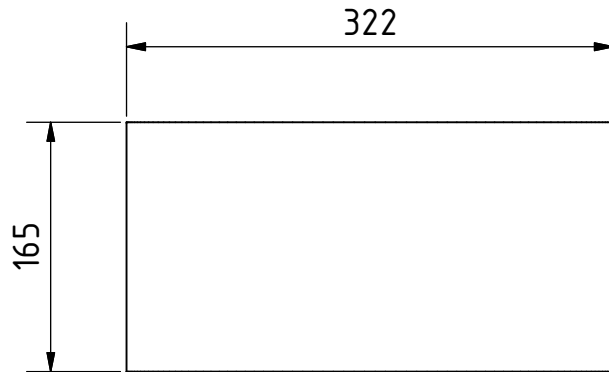
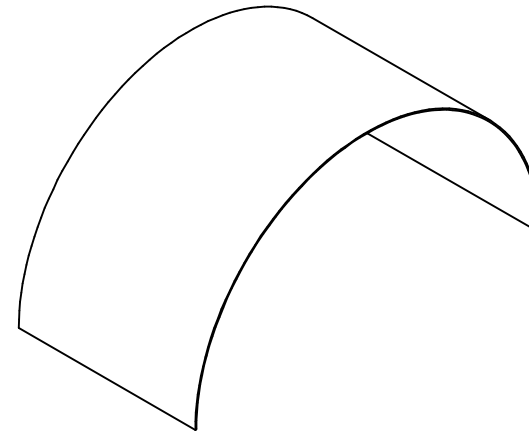
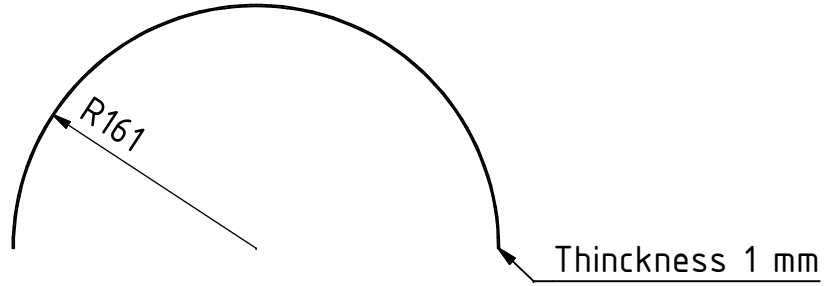
ELEVATION (1 : 3)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Cover under		FILE NAME Cover under.ipt			POS 3.12
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL 1mm thick alum alloy	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 29 /45	

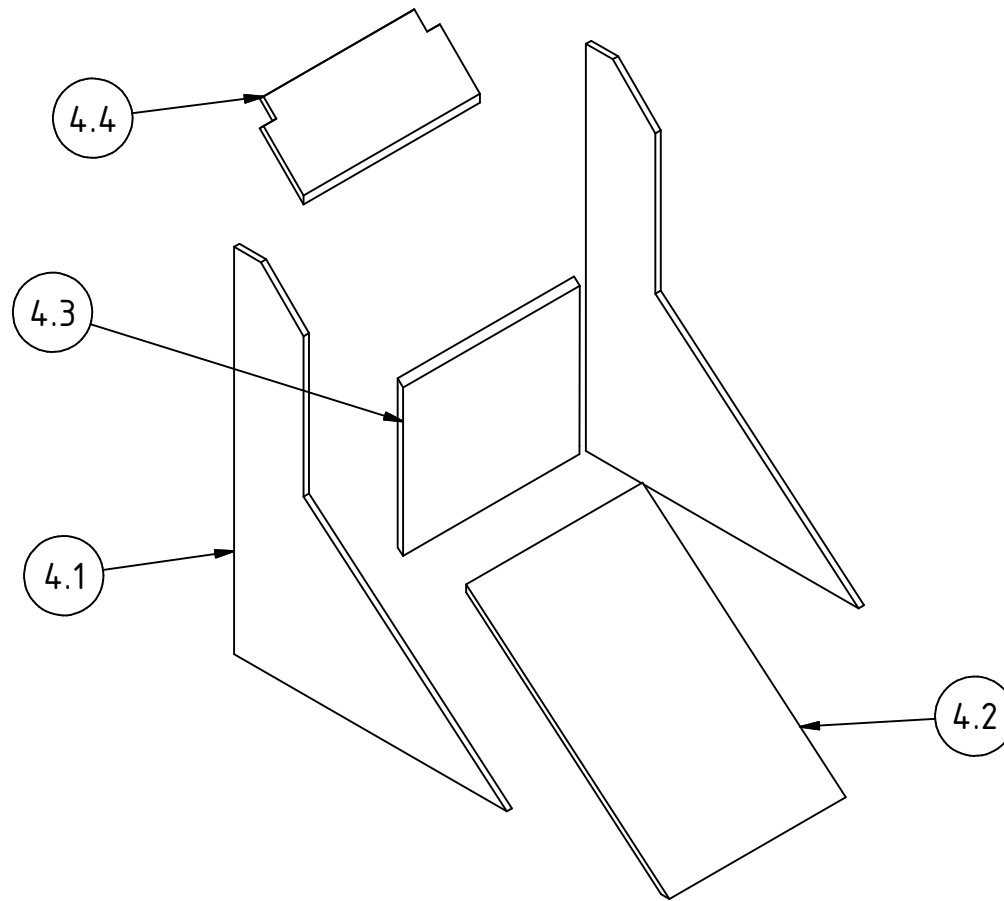
ELEVATION (1 : 5)

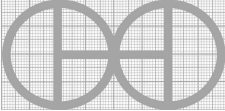


Note: All units in mm.

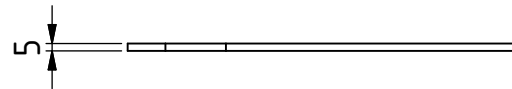
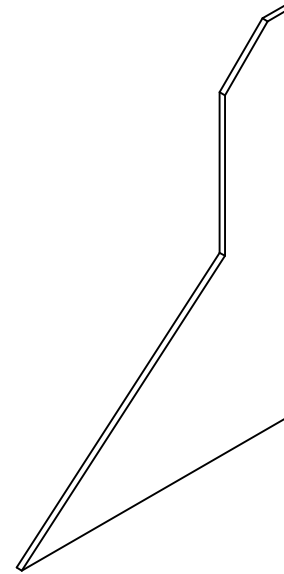
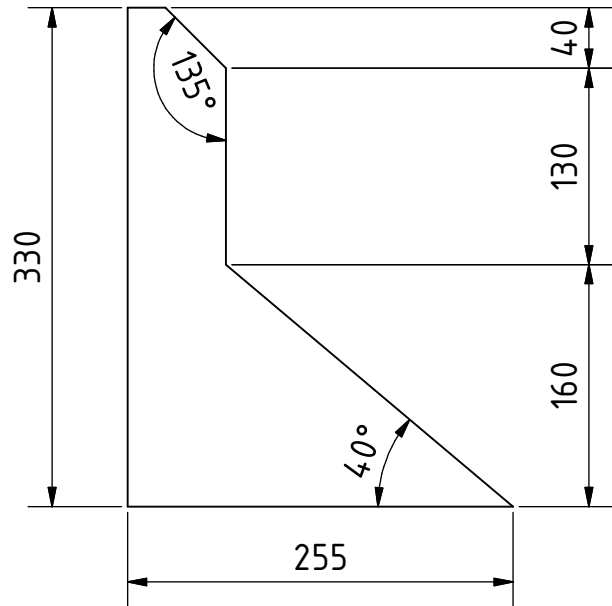
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Cover top		FILE NAME Cover top.ipt			POS 3.13
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL 1mm thick alum alloy	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 30 /45	

EXPLOSION (1 : 5)



PROJECT Hand Operated Winnowing for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Large grain chute		FILE NAME Large grain chute.ipn			POS 4.0
DEVELOPED BY Tropical Products Institut	REDESIGNED BY  OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 31 /45	

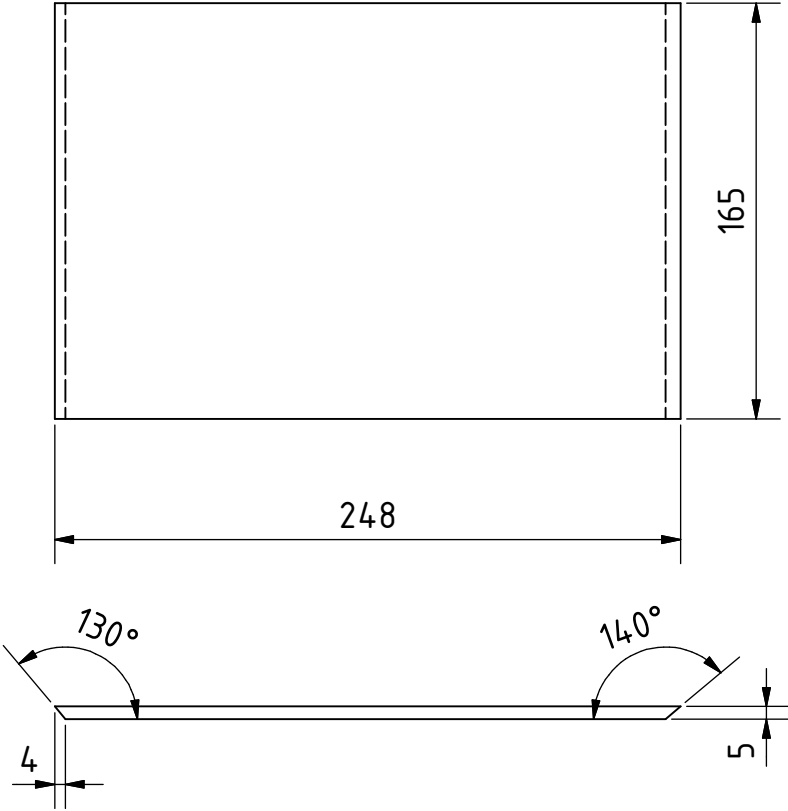
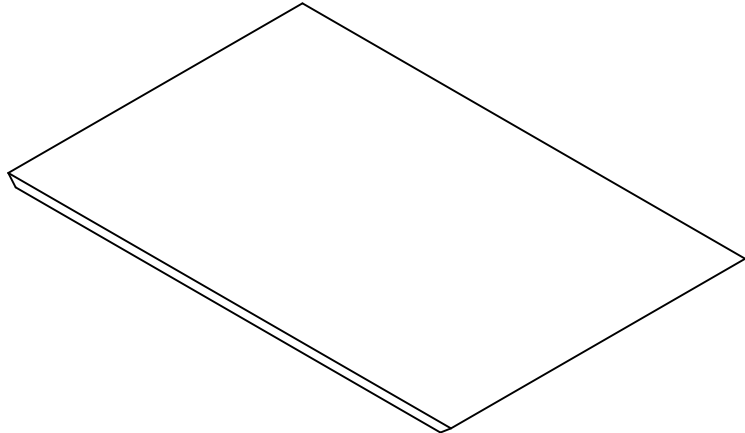
ELEVATION (1 : 5)



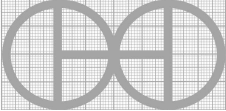
Note: All units in mm.

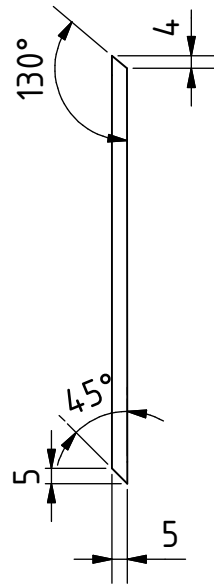
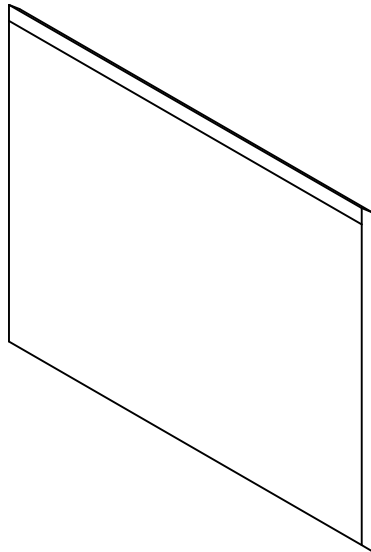
PROJECT Hand Operated Winnowing for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel A		FILE NAME Panel A.ipt			POS 4.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 32 /45	

PLAN (1 : 3)

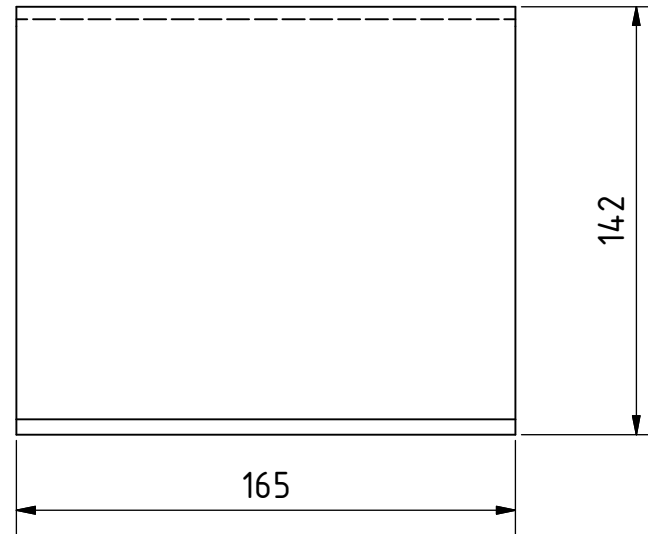


Note: All units in mm.

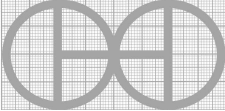
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel B		FILE NAME Panel B.ipt			POS 4.2
DEVELOPED BY	REDESIGNED BY		DOC. TYPE	MATERIAL	QUANTITY
			Part	Plywood	1
Tropical Products Institut	OHO e.V.	CC-BY-SA 4.0	LICENCE	SCALE	SHEET
				1:3	33 /45



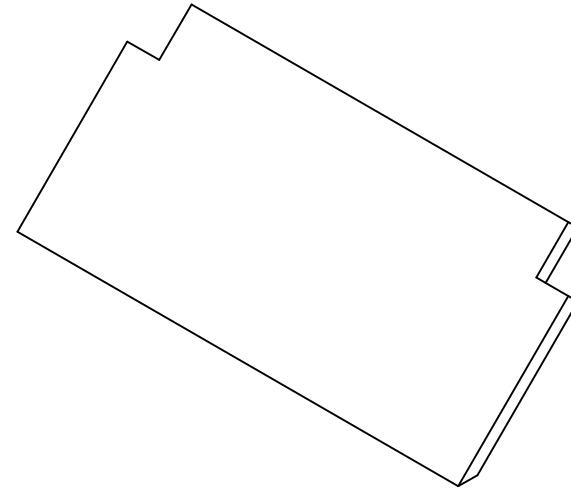
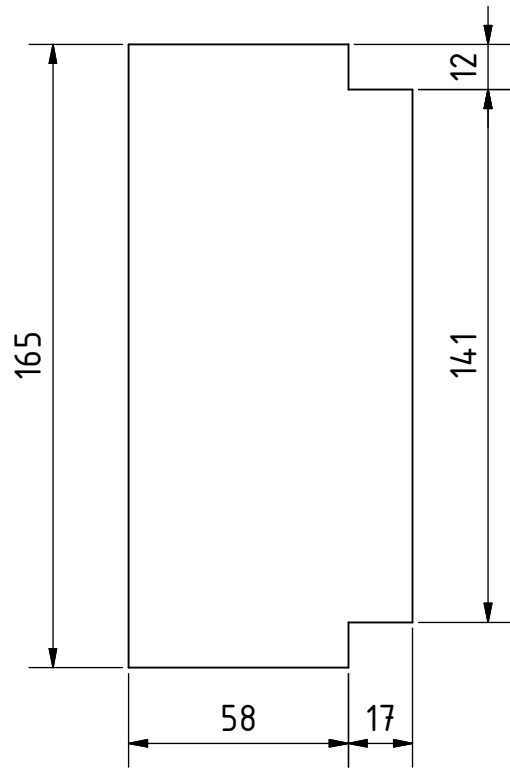
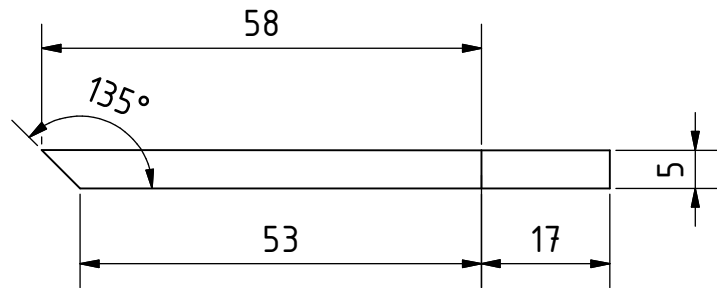
PLAN (1 : 2.5)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel C		FILE NAME Panel C.ipt			POS 4.3
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
		Part	Plywood	1	
Tropical Products Institut	OHO e.V.	LICENCE CC-BY-SA 4.0	SCALE 1:2.5	SHEET 34 /45	

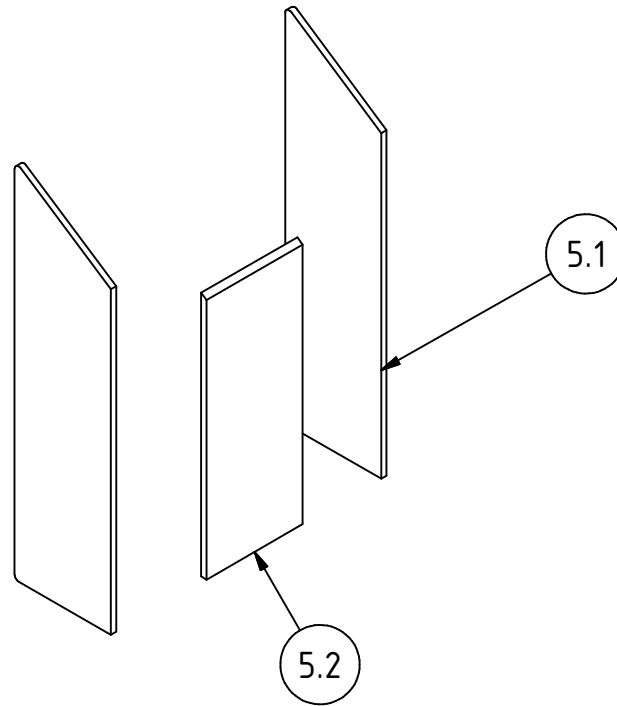
SIDE (1 : 1)



Note: All units in mm.

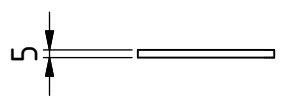
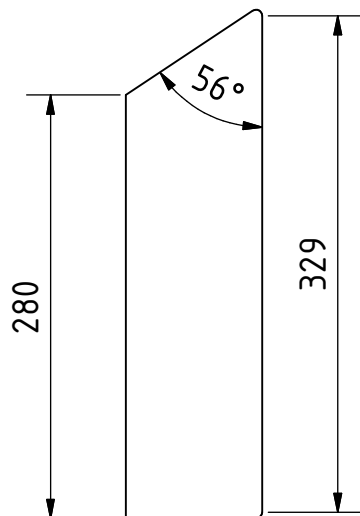
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel D		FILE NAME Panel D.ipt			POS 4.4
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:1	SHEET 35 /45	

EXPLOSION (1 : 5)



PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Chute		FILE NAME Chute.ipn			POS 5.0
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 36 /45	

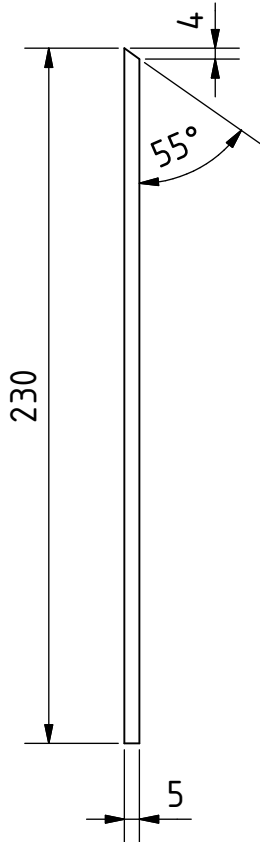
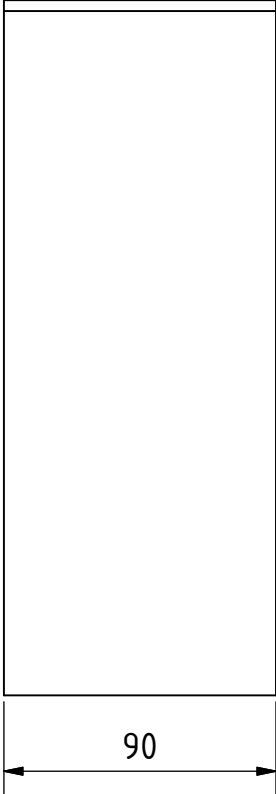
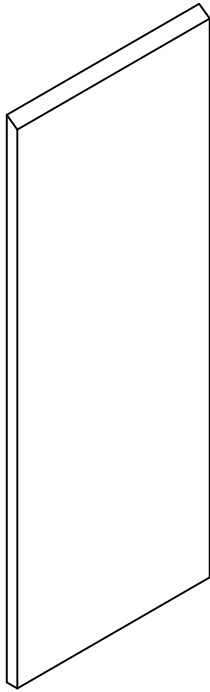
ELEVATION (1 : 5)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel A		FILE NAME Panel A.ipt			POS 5.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 37 /45	

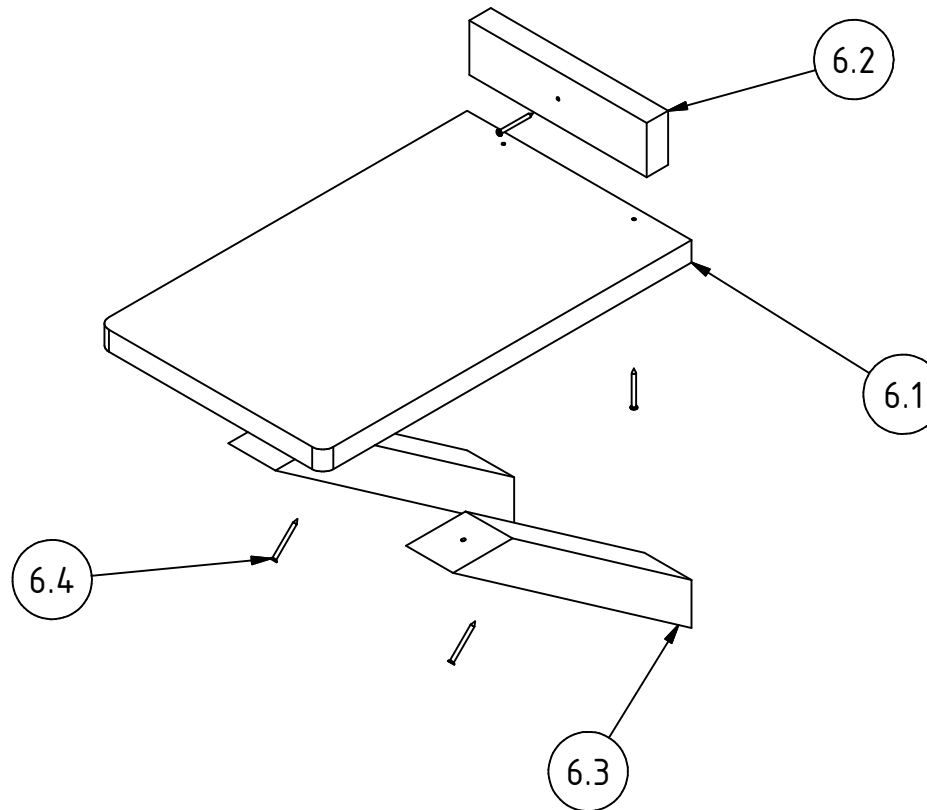
FRONT (1 : 2.5)



Note: All units in mm.

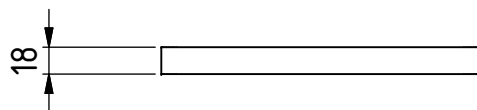
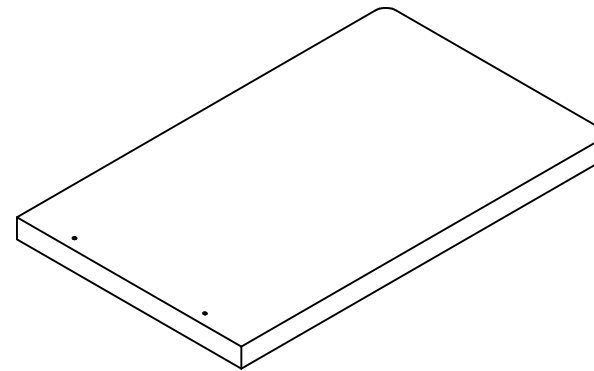
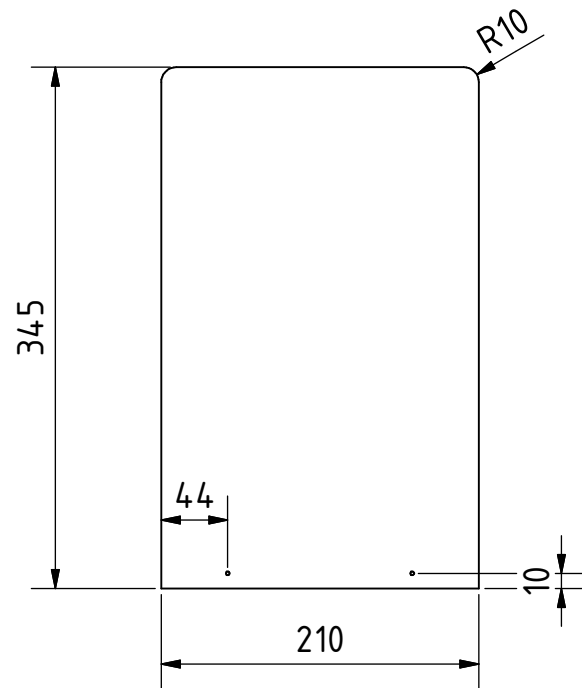
PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Panel B		FILE NAME Panel B.ipt			POS 5.2
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:2.5	SHEET 38 /45	

EXPLOSION (1 : 5)



PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Table		FILE NAME Table.ipn			POS 6.0
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 39 /45	

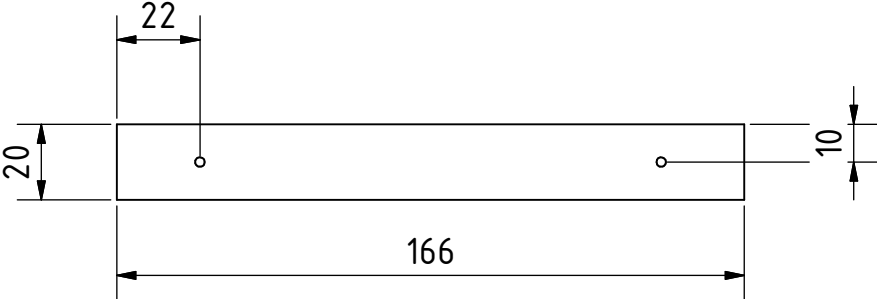
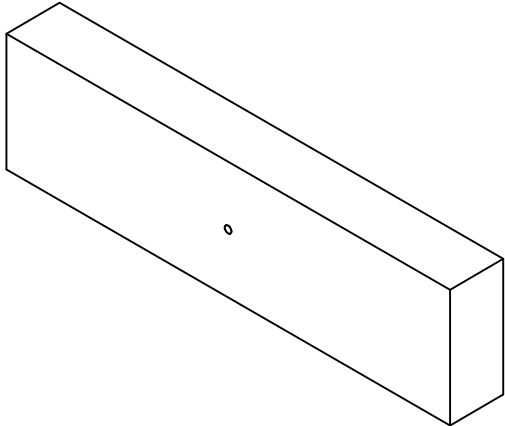
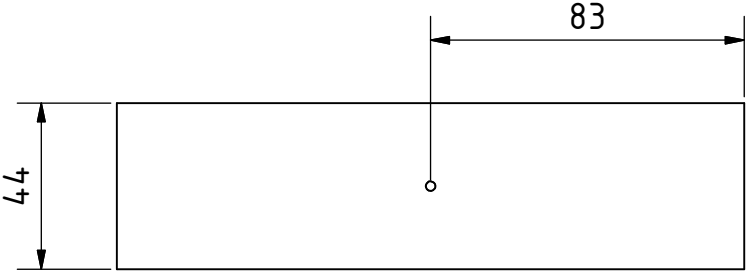
PLAN (1 : 5)



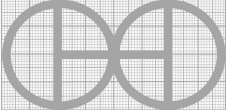
Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Table		FILE NAME Table.ipt			POS 6.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:5	SHEET 40 /45	

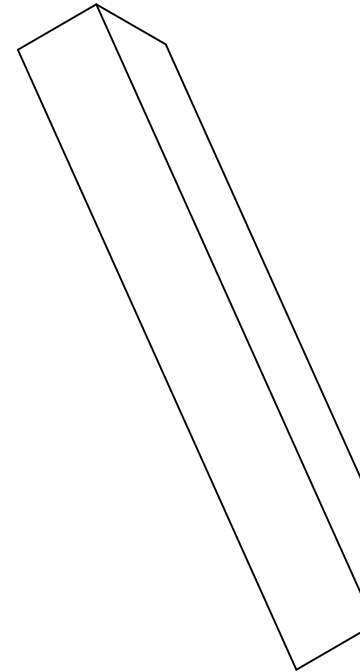
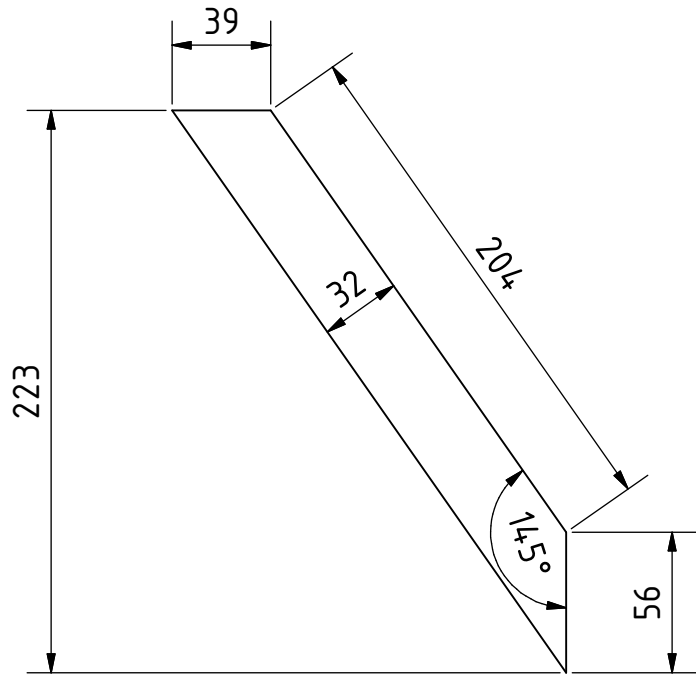
ELEVATION (1 : 2)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Back block		FILE NAME Back block.ipt			POS 6.2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
		Part	Hard wood	1	
Tropical Products Institut		LICENCE	SCALE	SHEET	
OHO e.V.		CC-BY-SA 4.0	1:2	41 /45	

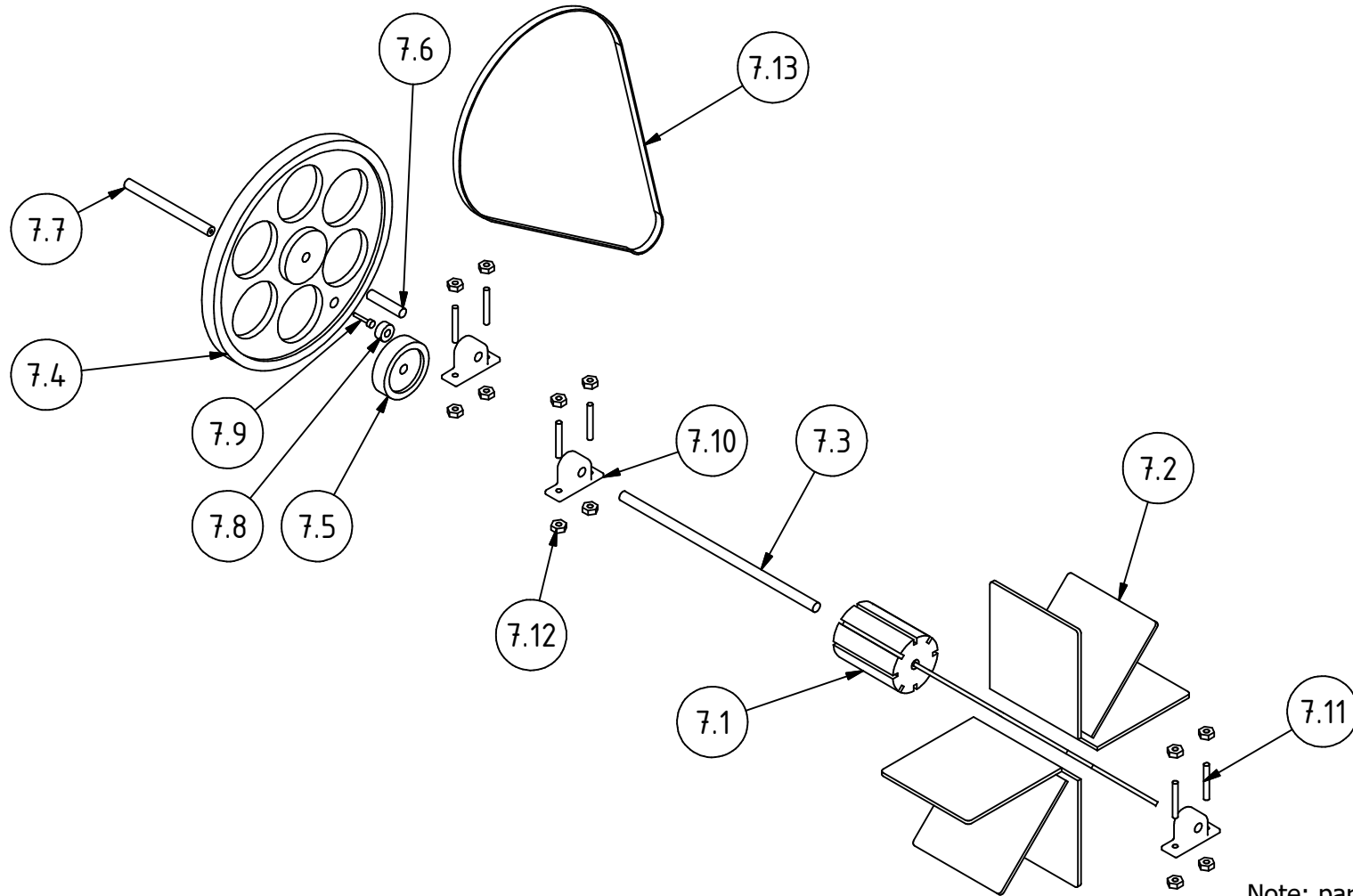
ELEVATION (1 : 3)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Leg		FILE NAME Leg.ipt			POS 6.3
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 42 /45	

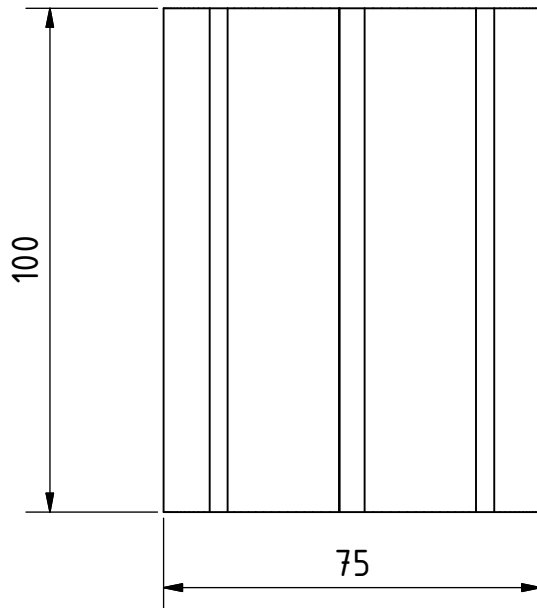
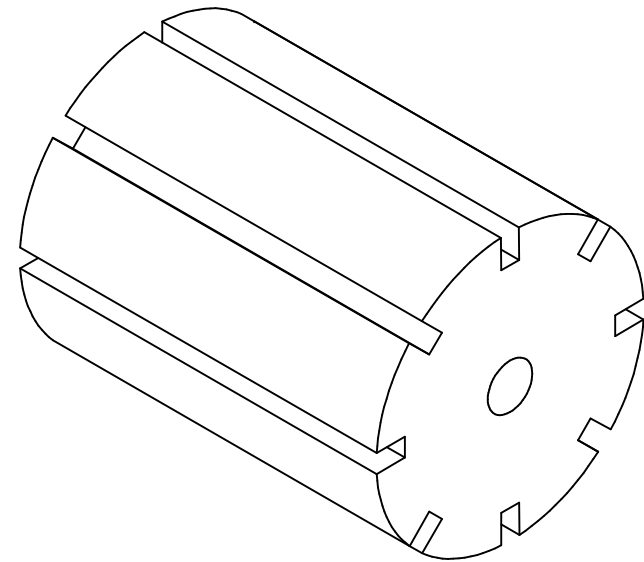
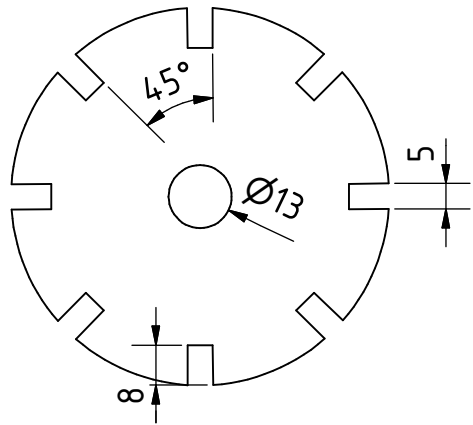
EXPLOSION (1 : 8)



Note: part 7.1 and 7.2 are glued.

PROJECT Hand Operated Winnowing for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Fan components		FILE NAME Fan components.ipn			POS 7.0
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 43 /45	

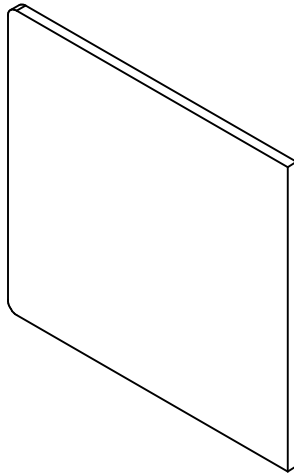
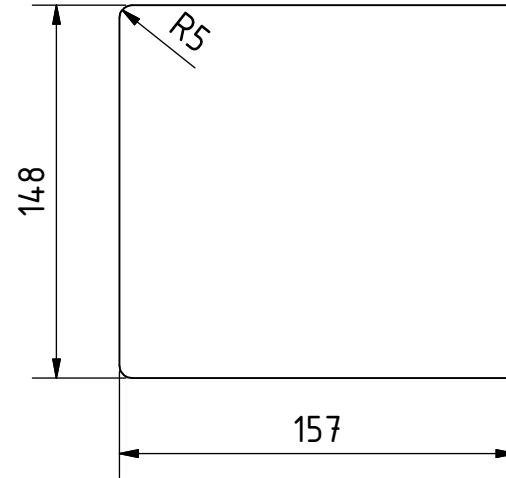
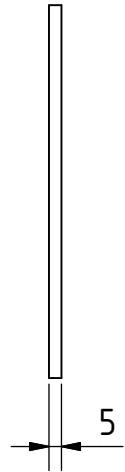
ELEVATION (1 : 1.5)



Note: All units in mm.

PROJECT Hand Operated Winnowing for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Body		FILE NAME Body.ipt			POS 7.1
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Hard wood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:1.5	SHEET 44 /45	

PLAN (1 : 3)



Note: All units in mm.

PROJECT Hand Operated Winnower for groundnut		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 09/08/2021	VERSION 1.0
PART NAME Blade		FILE NAME Blade.ipt			POS 7.2
DEVELOPED BY Tropical Products Institut	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 45 /45	