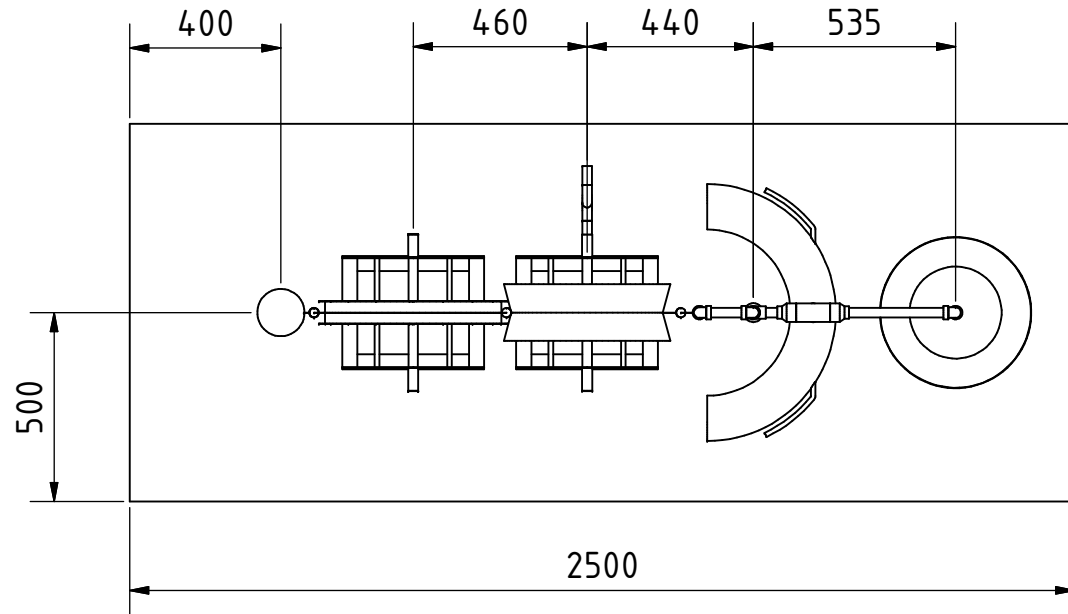
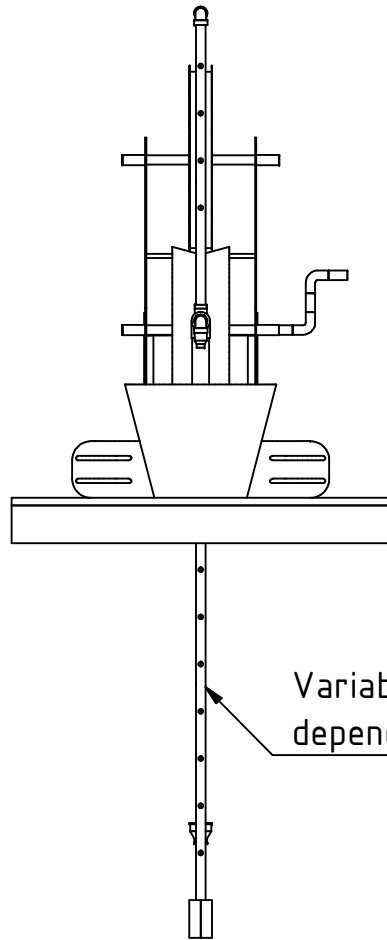


Note: All units in mm.

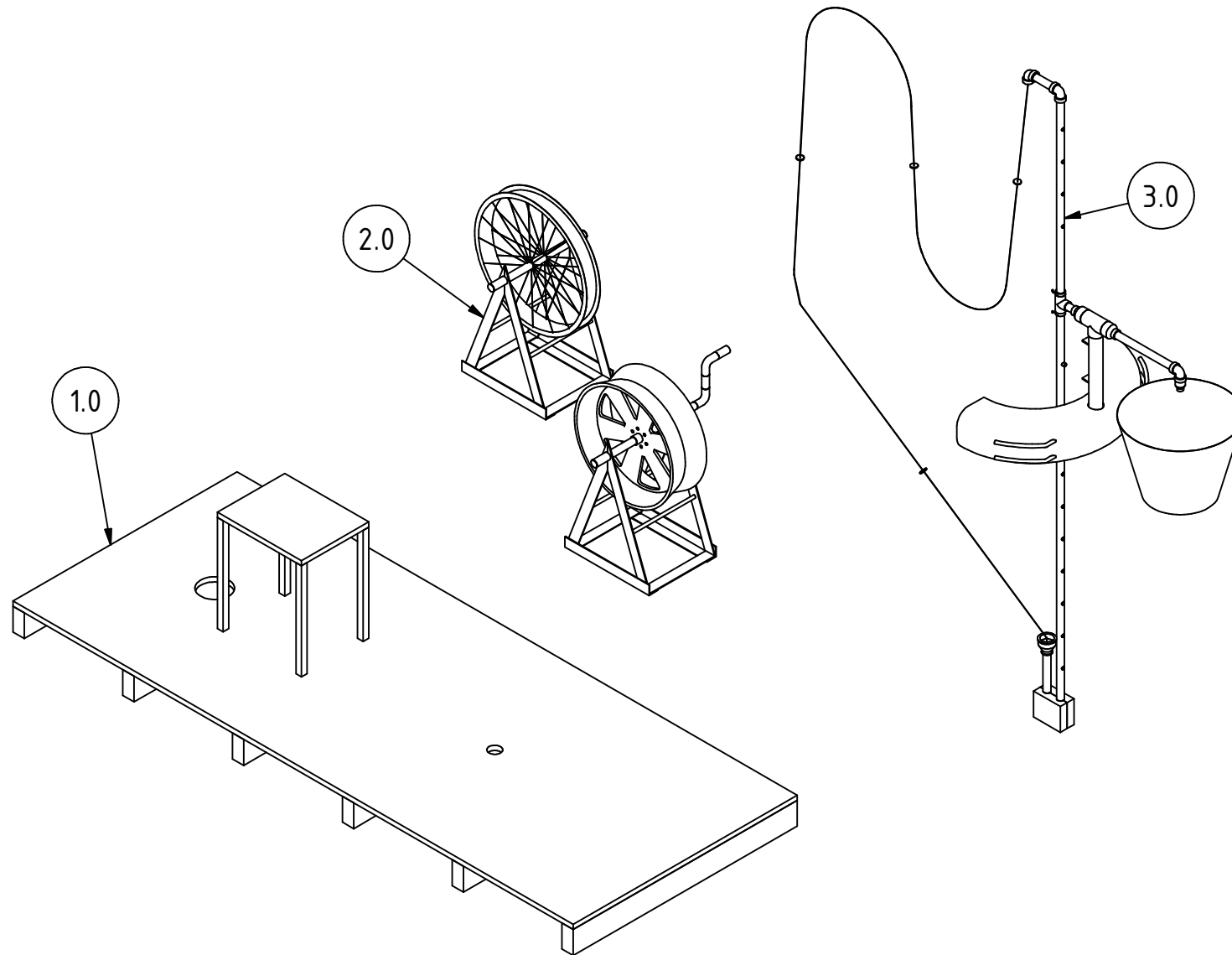
PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME 3d views		FILE NAME Rope Pump with Depth adjustable.iam			POS A1
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	LICENCE CC-BY-SA 4.0	QUANTITY SHEET 1 / 22
			SCALE 1:20		



Variable length,
depending on water level.

Note: All units in mm.

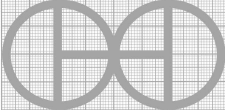
PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME 3d views		FILE NAME Rope Pump with Depth adjustable.iam			POS A1
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	LICENCE CC-BY-SA 4.0	QUANTITY SHEET 2 /22
		SCALE 1:20			



PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Exploded 3d view		FILE NAME Rope Pump with Depth adjustable.ipn			POS A2
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY	
		LICENCE CC-BY-SA 4.0	SCALE 1:20	SHEET 3 /22	

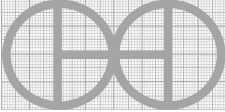
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
A1	-	3d views	app_rpd_rope_pump_with_depth_adjustable.iam	-	-	1-2
A2	-	Exploded 3d view	app_rpd_rope_pump_with_depth_adjustable.ipn	-	-	3
B1	-	Parts list	app_rpd_rope_pump_with_depth_adjustable.csv	-	-	4-5
C1	-	Technical notes	-	-	-	6
1.0	1	Platform	Platform.ipn	-	-	7-8
1.1	6	Beam	Beam	Production	Hardwood 50x100x1000mm	-
1.2	1	Planked	Planked.ipt	Production	Plywood 20mm	9
1.3	4	Leg	-	Production	Hardwood 25x25x430mm	-
1.4	1	Top	-	Production	Hardwood 375x300x20mm	-
1.5	50	Nails A	-	Buy	Galvanized nails 2.5x60mm	-
2.0	1	Wheel structure	Wheel structure.ipn	-	-	10-11
2.1	4	Bottom Angle	-	Production	Steel A36 angle 40x40x3mm	-
2.2	8	Leg plate	Leg plate.ipt	Production	Steel A36 plate 40x3mm	12
2.3	4	Union plate	-	Production	Steel A36 plate 40x288x3mm	-
2.4	4	Rigidizer	-	Production	Steel A36 bar 12x288mm	-
2.5	4	Shaft bearing	-	Production	Black iron tube 1-1/4" L:60mm schedule 40	-
2.6	3	Shaft bearing stop	Shaft bearing stop.ipt	Production	Steel C45 circular sheet 3mm	13
2.7	1	Shaft A	-	Production	Black iron tube 1" L:450mm schedule 40	-
2.8	1	Shaft A-1	-	Production	Black iron tube 1" L:414mm schedule 40	-
2.9	2	Shaft elbow	-	Standard	Black iron elbow 1"	-
2.10	2	Shaft B	-	Production	Black iron tube 1" L:50mm schedule 40	-
2.11	1	Coupling tube	-	Production	Black iron tube 1-1/4" L:55mm schedule 40	-
2.12	1	Pumping wheel	-	Production	Used 450mm vehicule rim or similar	-
2.13	1	Bicycle wheel	-	Production	Used 500mm bycycle rim similar	-

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Parts list		FILE NAME app_rpd_rope_pump_with_depth_adjustable.csv			POS B1
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Parts list	MATERIAL LICENCE CC-BY-SA 4.0	SCALE	QUANTITY SHEET 4 /22

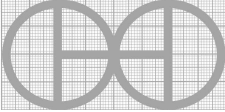
Parts list

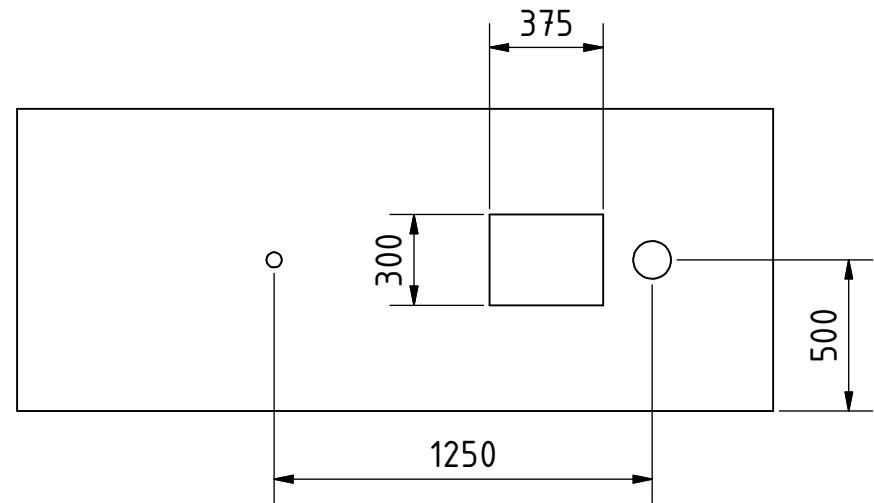
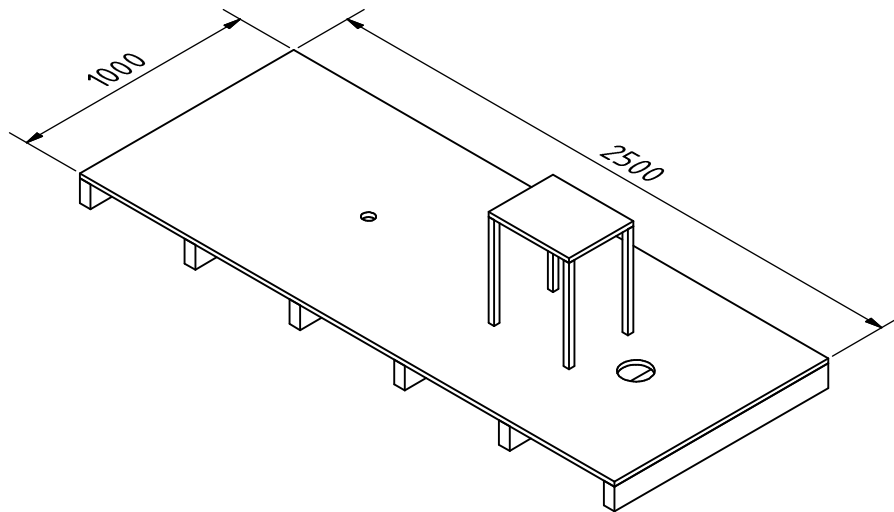
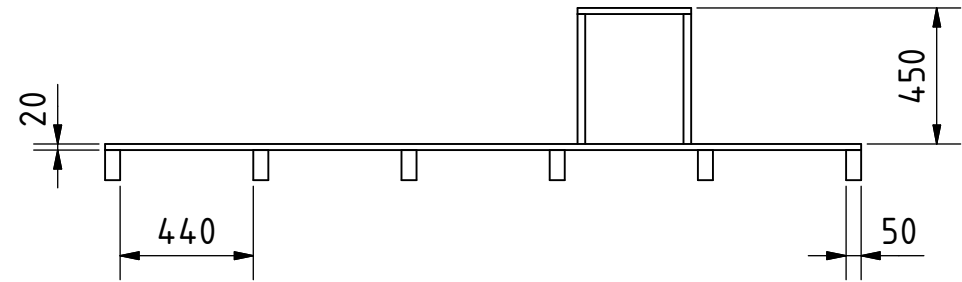
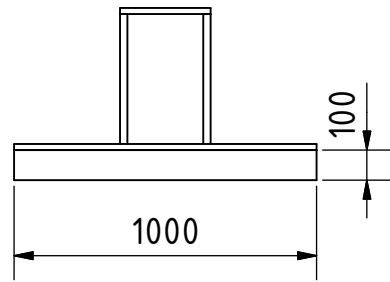
POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
3.0	1	Piping system	Piping system.ipn	-	-	14-15
3.1	1	Adjustable pipe A	Adjustable pipe A.ipt	Production	ASTM D 1785 PVC weldable pipe 1" - schedule 40	16
3.2	1	Adjustable pipe B	Adjustable pipe B.ipt	Production	ASTM D 1785 PVC weldable pipe 1" - schedule 40	17
3.3	1	Adjustable pipe C	-	Production	ASTM D 1785 PVC weldable pipe 1" L:150mm - schedule 40	-
3.4	1	Adjustable pipe D	-	Production	ASTM D 1785 PVC weldable pipe 1" L:80mm - schedule 40	-
3.5	1	Reducing Couple	-	Standard	2"/1" PVC weldable reducing couple	-
3.6	1	Hole plug	Hole plug.ipt	Production	Made from used car tire	18
3.7	2	Shaft collar	-	Standard	1-1/4" shaft collar	-
3.8	1	Tee A	-	Standard	1" PVC weldable T-joint	-
3.9	1	Spillway pipe A	-	Production	ASTM D 1785 PVC weldable pipe 1" L:80mm - schedule 40	-
3.10	1	Tee B	-	Standard	2" PVC weldable T-joint	-
3.11	2	Pipe Reduction A	-	Standard	1-2" PVC weldable pipe Reduction	-
3.12	1	Spillway pipe B	-	Production	ASTM D 1785 weldable pipe 1" L:250mm - schedule 40	-
3.13	3	Elbow	-	Standard	1" PVC weldable elbow	-
3.14	1	Pipe Reduction B	-	Standard	1-1/2" PVC weldable pipe Reduction	-
3.15	1	Support pipe	-	Production	ASTM D 1785 PVC weldable pipe 2" L:423mm - schedule 40	-
3.16	1	Cut tire	Cut tire.ipt	Production	Made from used car tire	19
3.17	2	Brake bar	Brake bar.ipt	Production	Steel A36 12mm	20
3.18	2	Underwater rope guide	Underwater rope guide.ipt	Production	Hardwood 30mm	21
3.19	1	Rope	-	Buy	Low capacity nylon rope, variable length	-
3.20	10	Piston	Piston.ipt	Production	Made from used car tire	22
3.21	12	Nails B	-	Buy	Galvanized nails 2.2x50mm	-

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Parts list		FILE NAME app_rpd_rope_pump_with_depth_adjustable.csv			POS B1
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Parts list	MATERIAL LICENCE CC-BY-SA 4.0	SCALE	QUANTITY SHEET 5 /22

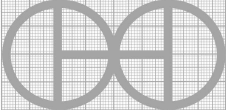
TECHNICAL NOTES

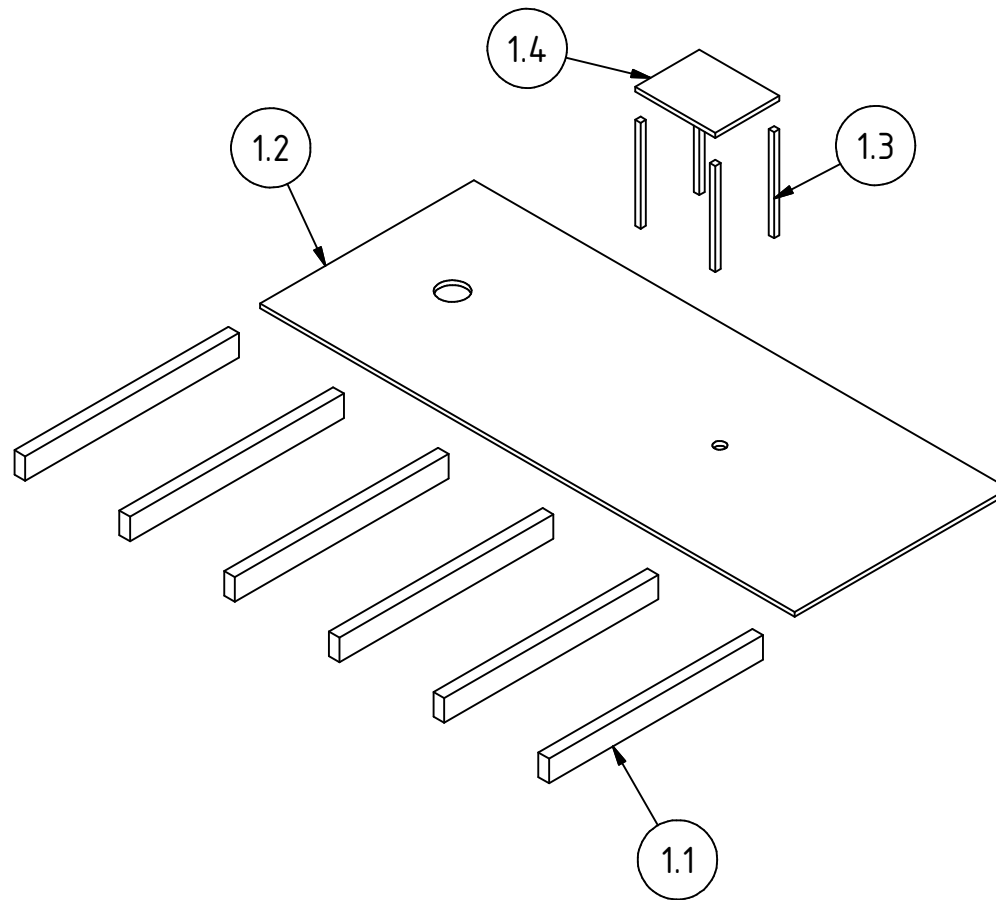
NOTES	CONTENT
GENERAL NOTES	
Notes	<p>- He rope pump is a relatively inexpensive solution for pumping water out of relatively deep man-made wells. Using multiple pistons connected to a rope, the pipe system sits partially underwater, while the user turns a crank above the well. As the crank turns, the rope is moved down into the well, up the pipe system, and around the crank wheel, repeating itself over and over again. As the rope passes through the partially submerged pipe system, these pistons connected to the rope draw water up the pipe system, to a spout at the surface, where the water can be used.</p> <p>- This type of pump uses an adjustable PVC piping system to vary both the depth of the system, and the force needed to bring up water. The pipe is able to be lowered to a desirable depth, and locked in place, so that it remains rigid while in operation.</p> <p>- The approximate length of the rope can be found by determining the entire depth of the well. Multiply the entire depth of the well by 2. Next, with the rope itself, run it through the above-ground system (ie. the pumping wheel and the bicycle wheel) and measure the length of this system. Add approximately 10 feet to the total length, since the rope will run at an angle to the vertical when ascending into the well. Once again, extra length to the rope to compensate for knots, which will be used to hold the pistons.</p> <p>- The shaft collars are the two components responsible for both holding the adjustable pipe system in place, and allowing it to move. If the force needed to turn the crank becomes very low, and not much water is being pumped, the system can be lowered in order to pump more water.</p>

PROJECT Rope Pump with Depth adjustable	CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Technical notes	FILE NAME			POS C1
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Technical notes	MATERIAL	QUANTITY
		LICENCE CC-BY-SA 4.0	SCALE	SHEET 6 /22

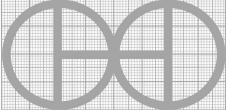


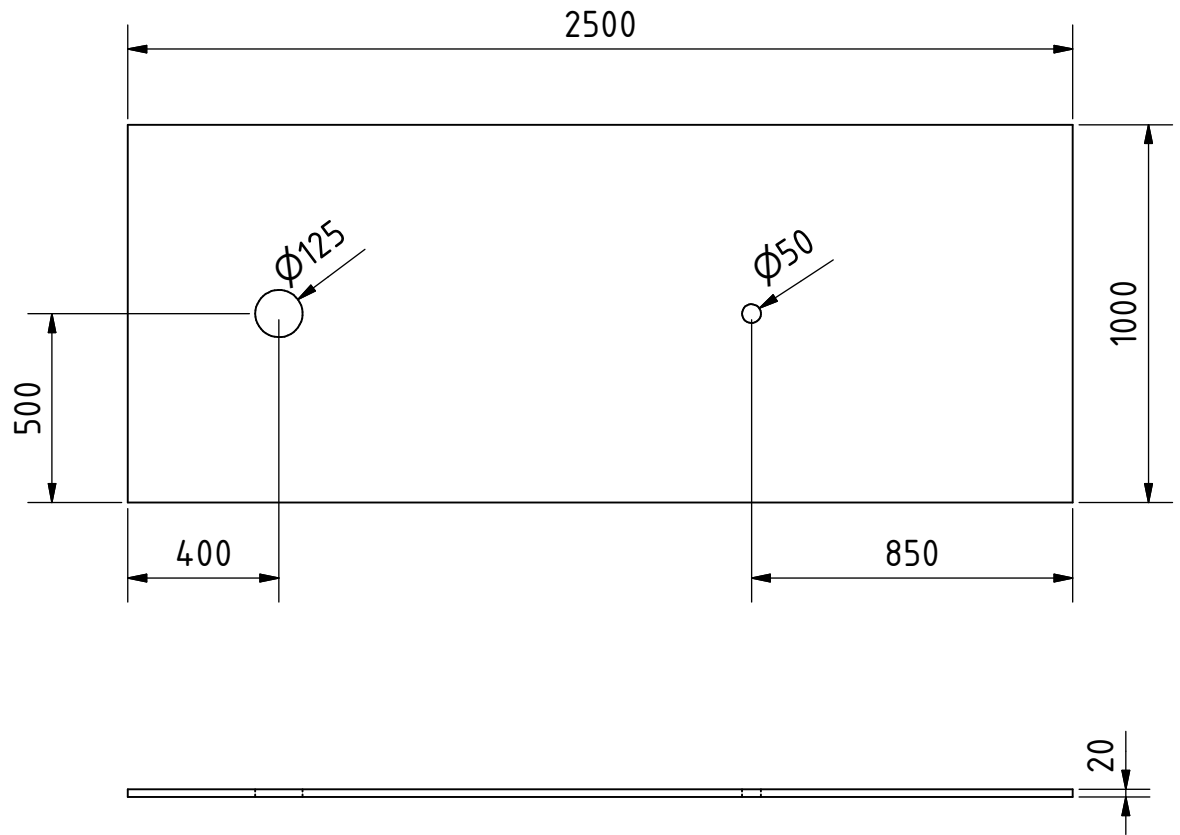
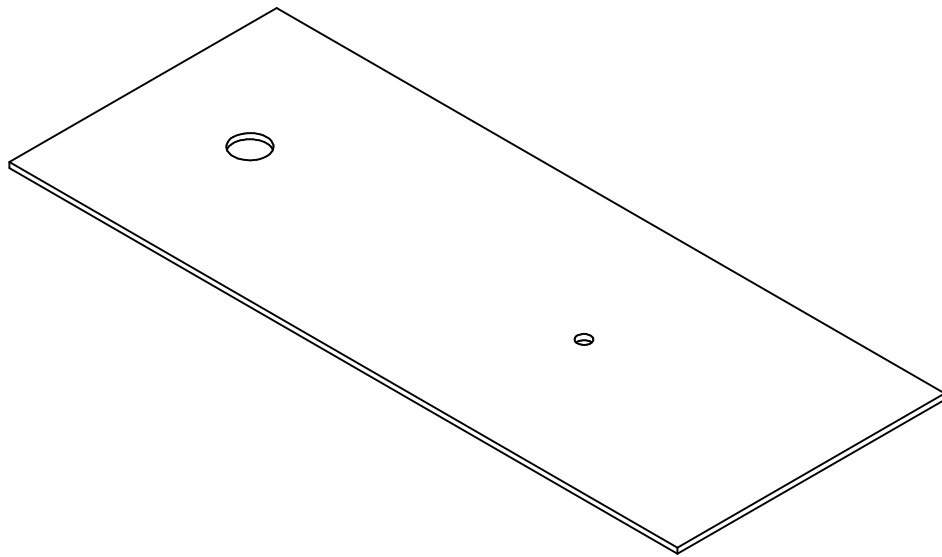
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Platform		FILE NAME Platform.ipn			POS 1.0
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:25	SHEET 7 /22	



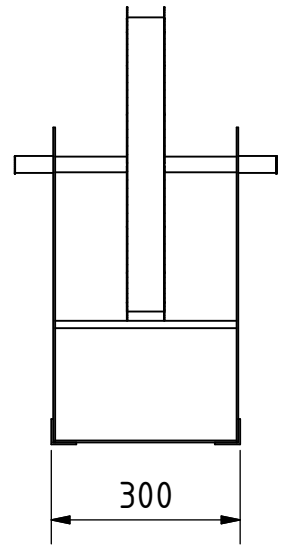
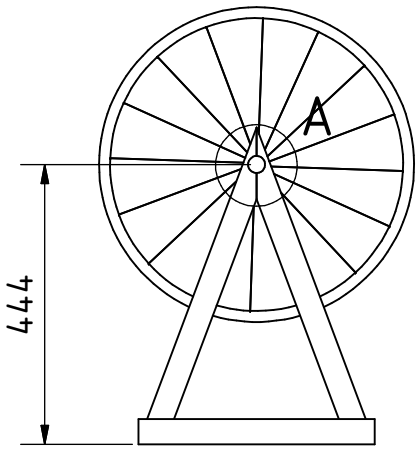
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Platform		FILE NAME Platform.ipn			POS 1.0
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:25	SHEET 8 /22	

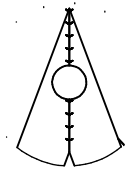


Note: All units in mm.

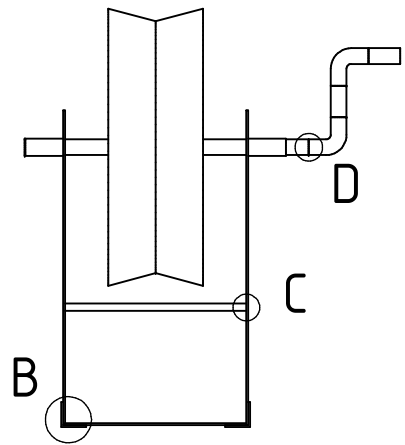
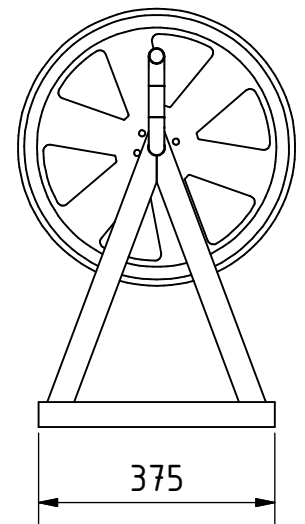
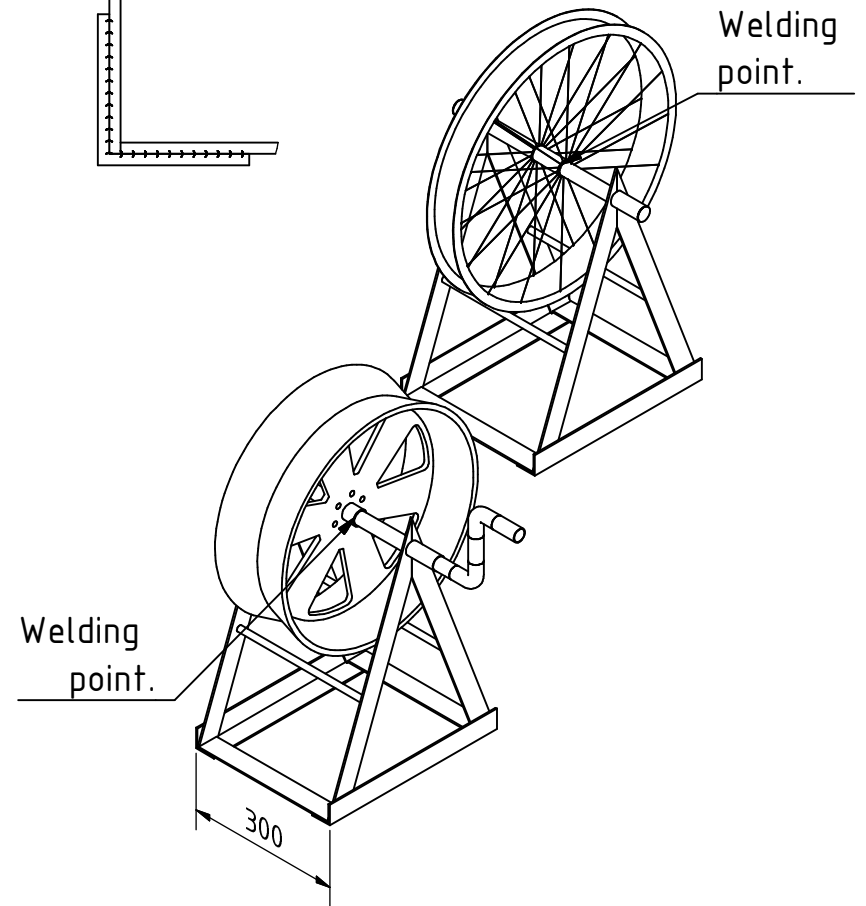
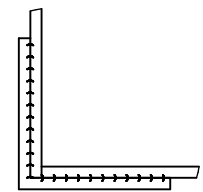
PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Planked		FILE NAME Planked.ipt			POS 1.2
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Plywood	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:20	SHEET 9 /22	



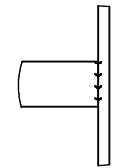
A (1 : 6)



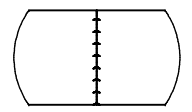
B (1 : 2)



C (1 : 2)

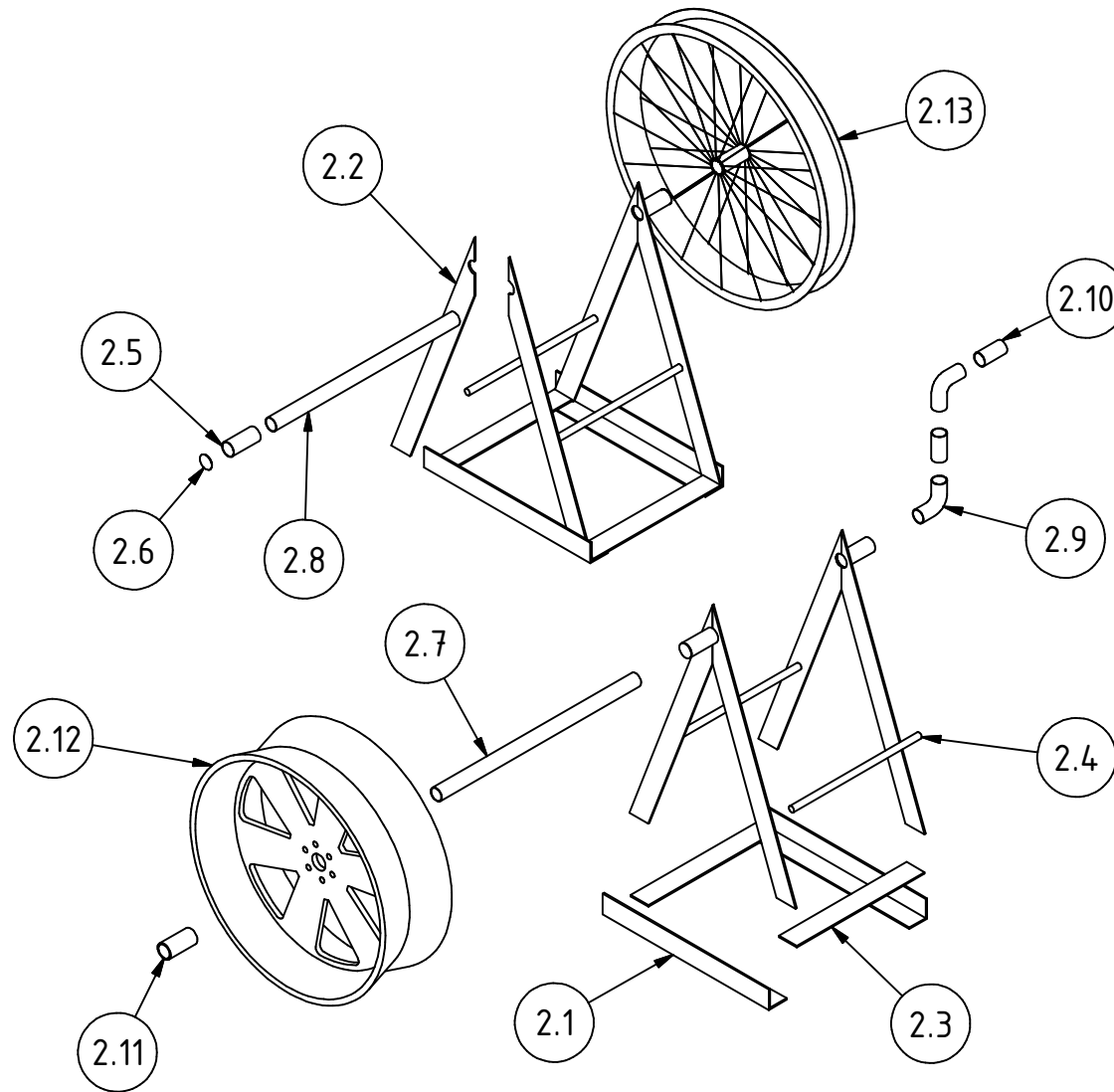


D (1 : 2)

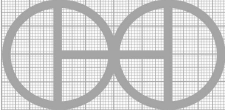


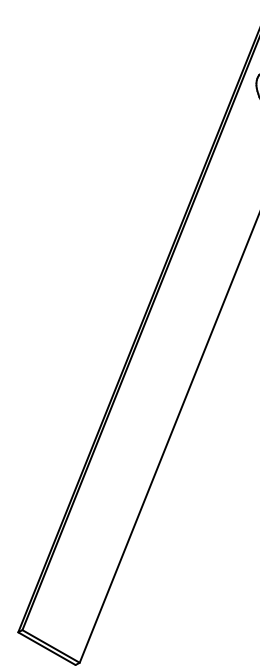
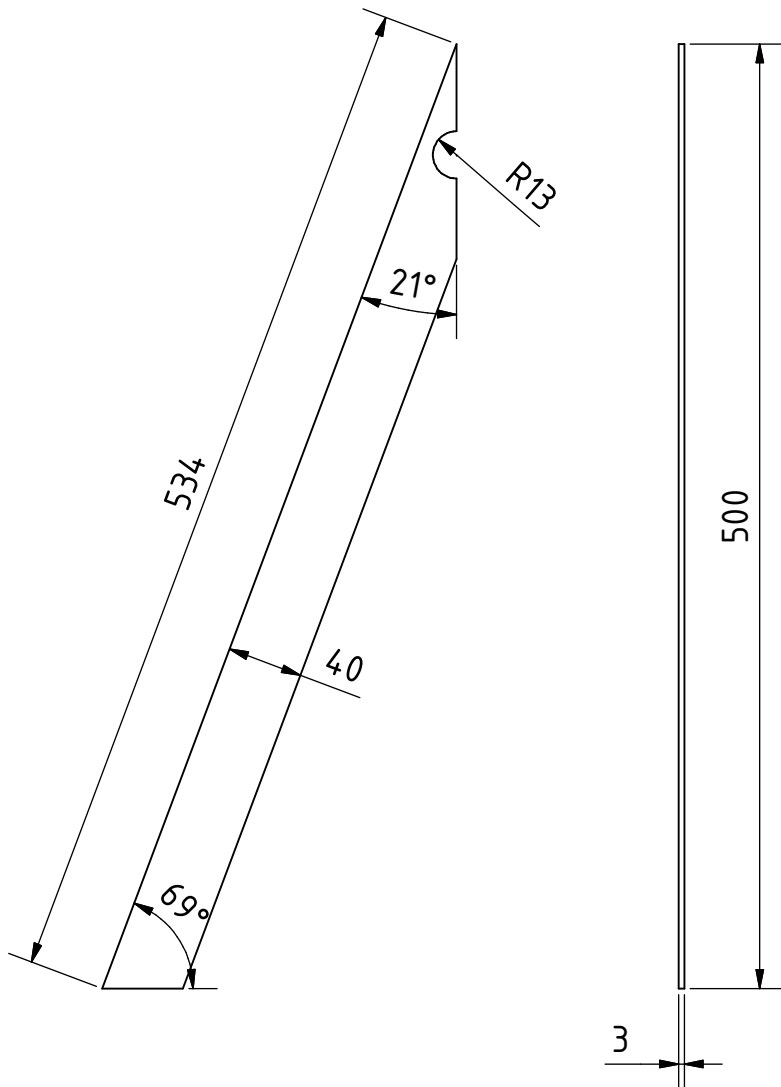
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Wheel structure		FILE NAME Wheel structure.ipn			POS 2.0
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:10	SHEET 10 /22	



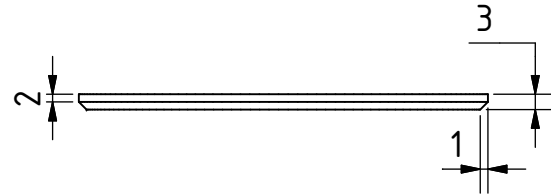
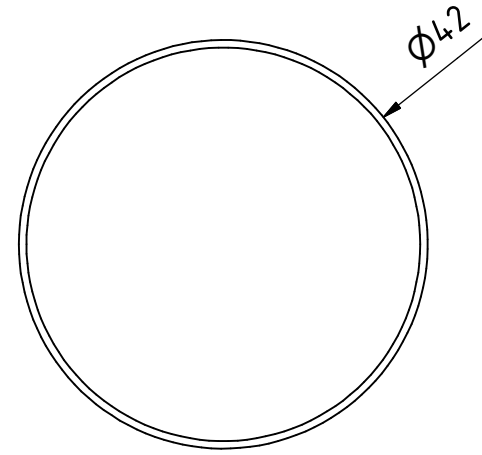
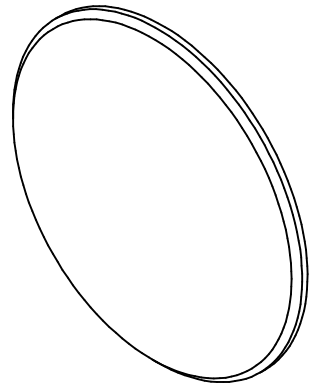
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron		APPROVED BY A. Morillo		DATE 30/08/2021		VERSION 1.0		
PART NAME Wheel structure		FILE NAME Wheel structure.ipn							POS 2.0	
DEVELOPED BY Appropedia		REDESIGNED BY OHO e.V.		DOC. TYPE Assembly		MATERIAL		QUANTITY 1		
				LICENCE CC-BY-SA 4.0		SCALE 1:12		SHEET 11 /22		



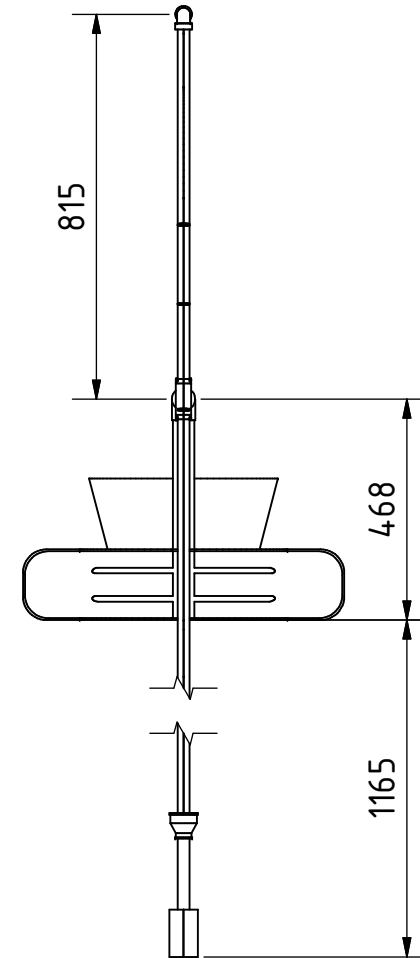
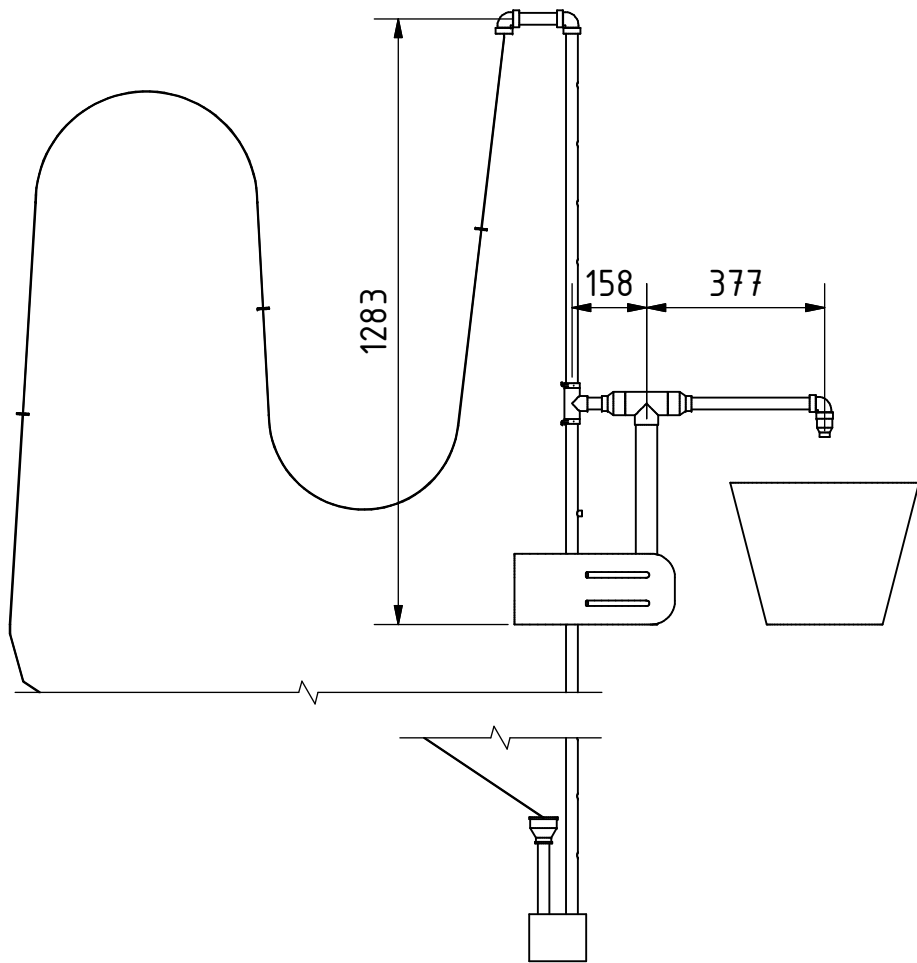
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Leg plate		FILE NAME Leg plate.ipt			POS 2.2
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Steel A36	QUANTITY 8	
		LICENCE CC-BY-SA 4.0	SCALE 1:4	SHEET 12 /22	



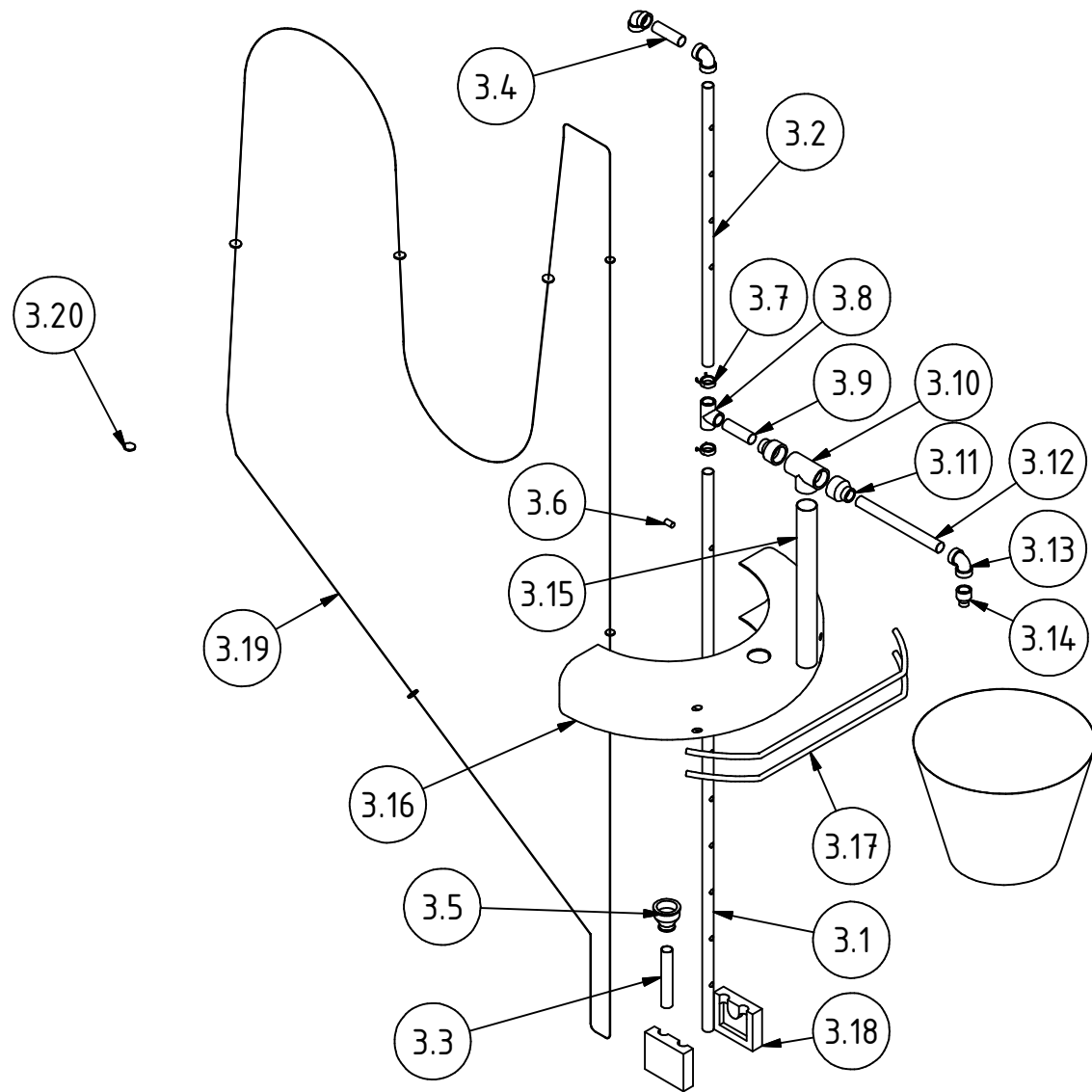
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Shaft bearing stop		FILE NAME Shaft bearing stop.ipt			POS 2.6
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Steel C45	QUANTITY 3	
		LICENCE CC-BY-SA 4.0	SCALE 2:1	SHEET 13 /22	

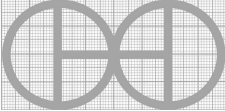


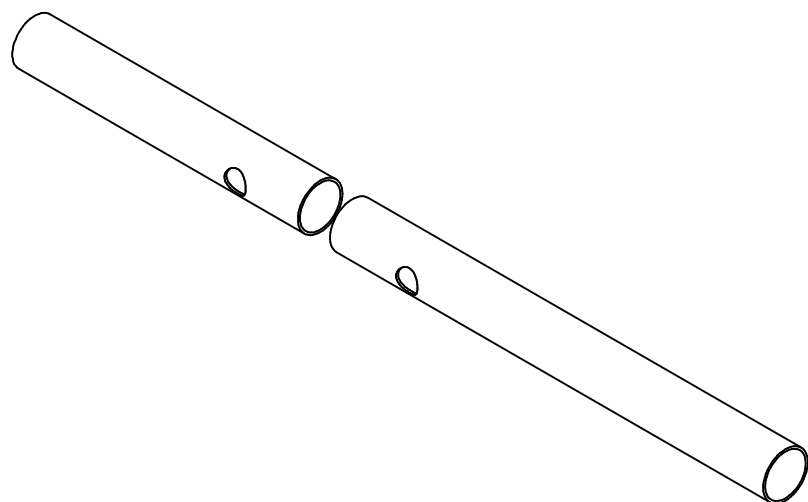
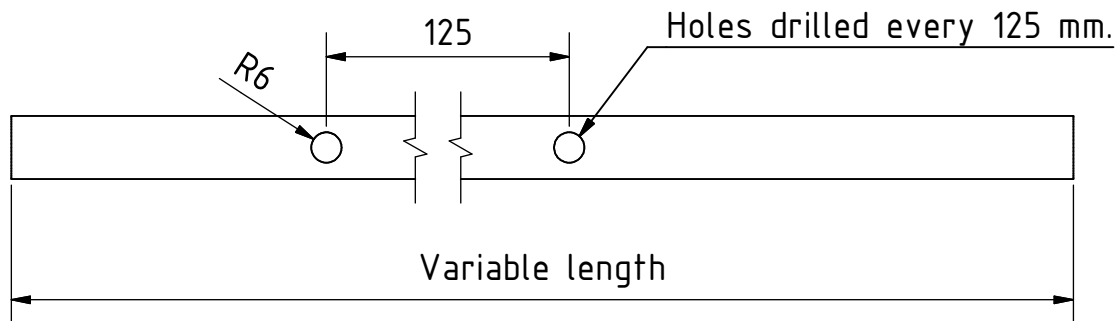
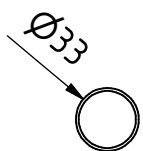
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Piping system		FILE NAME Piping system.ipn			POS 3.0
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Assembly	MATERIAL	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:16	SHEET 14 /22	



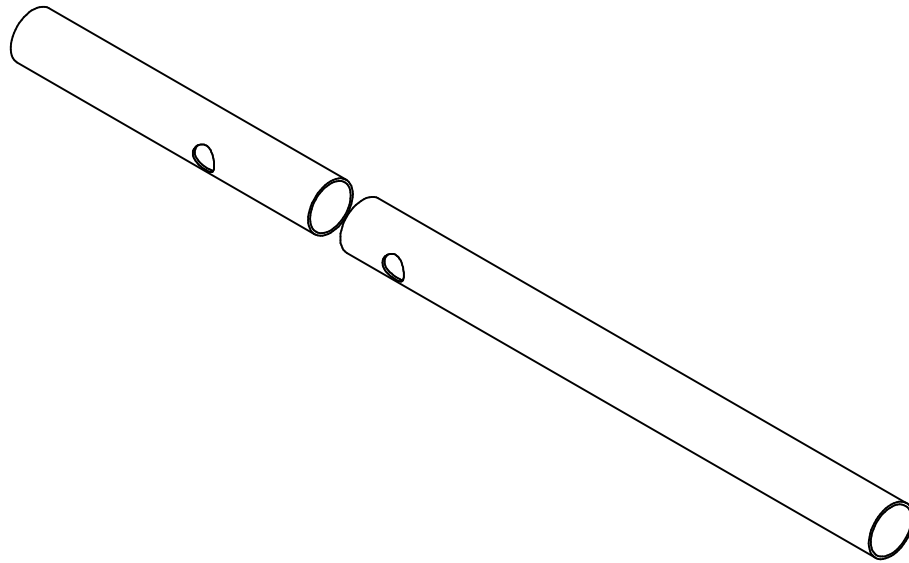
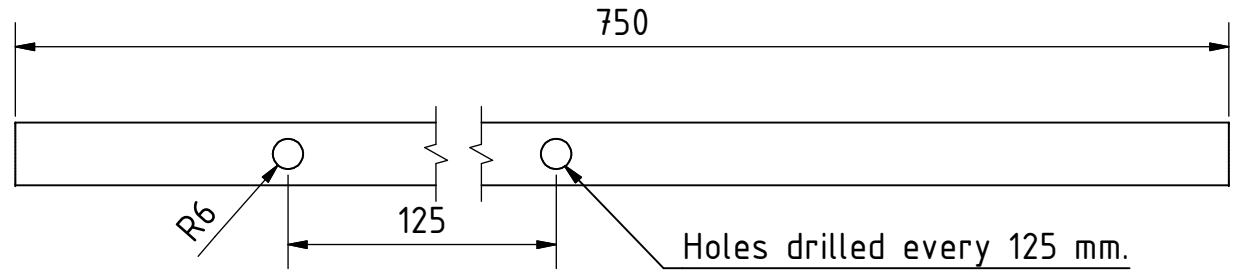
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron		APPROVED BY A. Morillo		DATE 30/08/2021		VERSION 1.0		
PART NAME Piping system		FILE NAME Piping system.ipn							POS 3.0	
DEVELOPED BY Appropedia		REDESIGNED BY  OHO e.V.		DOC. TYPE Assembly		MATERIAL		QUANTITY 1		
				LICENCE CC-BY-SA 4.0		SCALE 1:16		SHEET 15 /22		



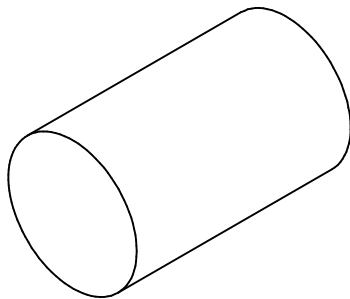
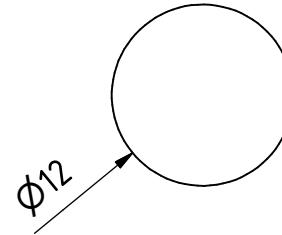
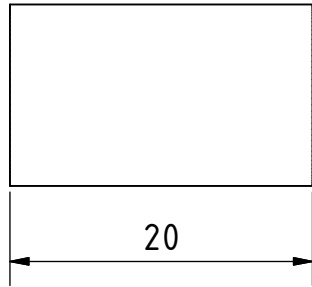
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Adjustable pipe A		FILE NAME Adjustable pipe A.ipt			POS 3.1
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL PVC schedule 40	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 16 /22	



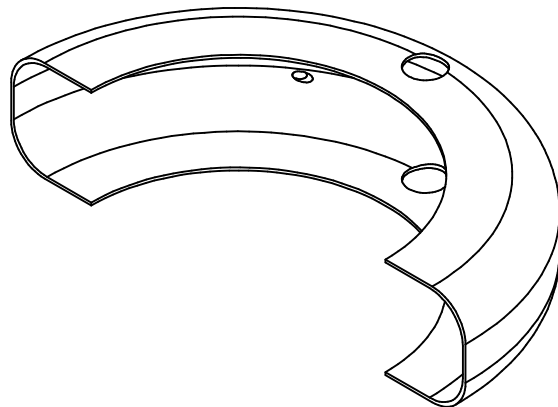
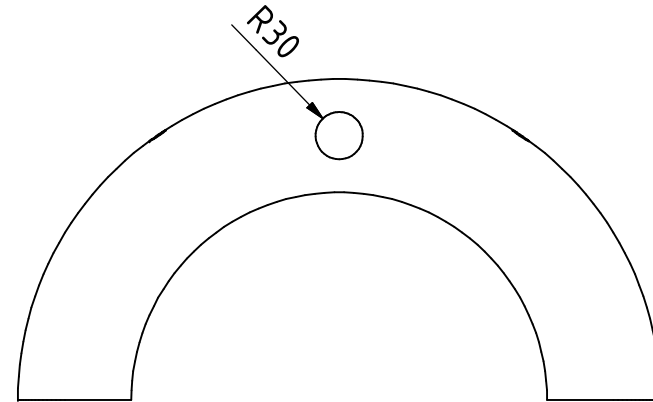
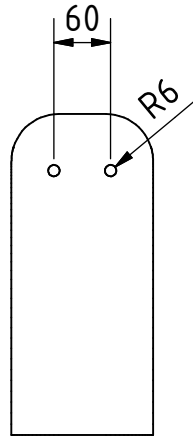
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Adjustable pipe B		FILE NAME Adjustable pipe B.ipt			POS 3.2
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL PVC schedule 40	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:3	SHEET 17 /22	



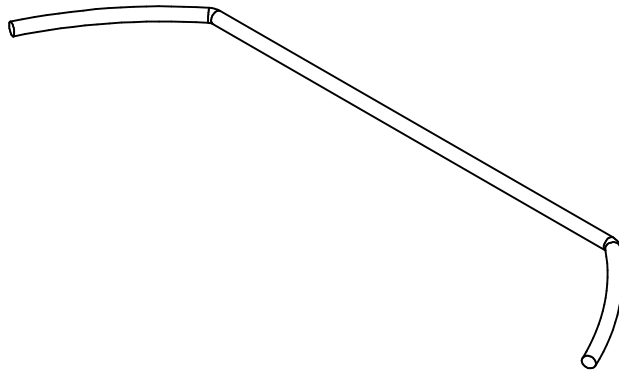
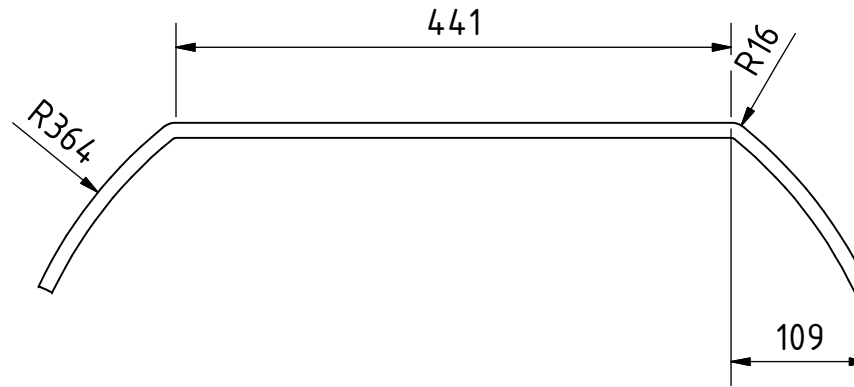
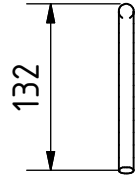
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Hole plug		FILE NAME Hole plug.ipt			POS 3.6
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Rubber	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 2:1	SHEET 18 /22	

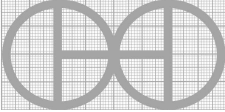


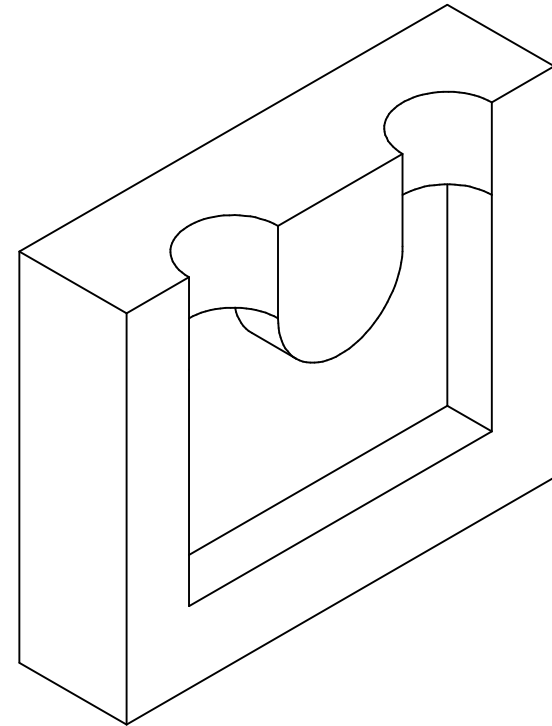
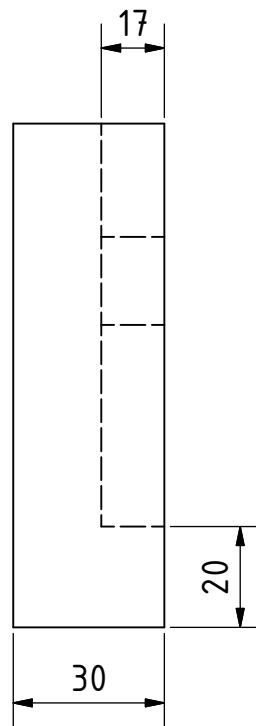
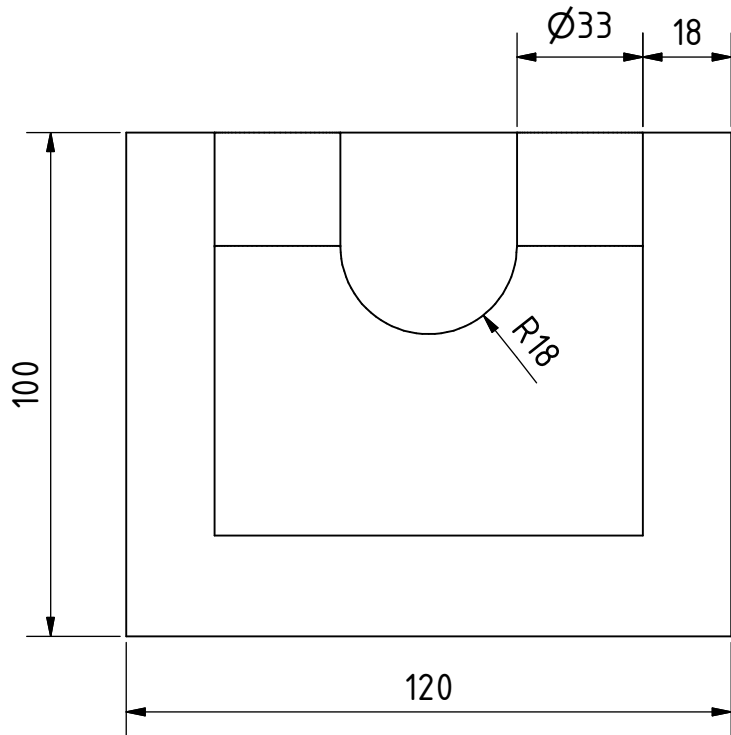
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME cut tire		FILE NAME Cut tire.ipt			POS 3.16
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Rubber	QUANTITY 1	
		LICENCE CC-BY-SA 4.0	SCALE 1:8	SHEET 19 /22	

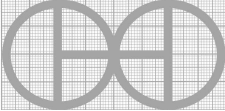


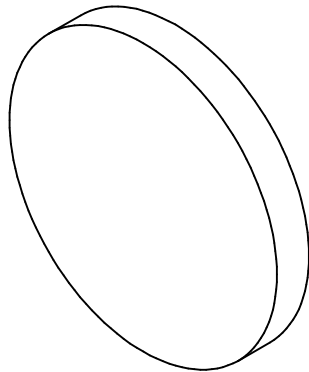
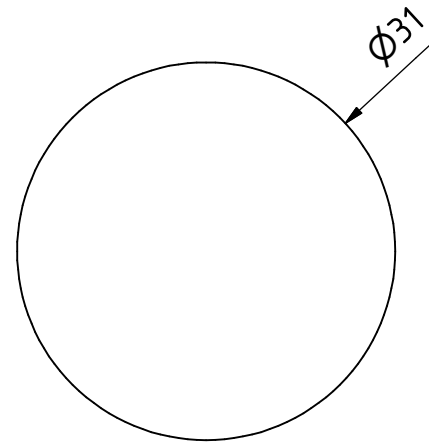
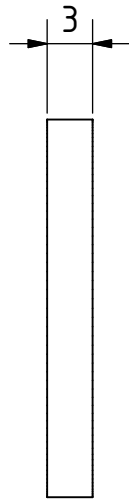
Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Brake bar		FILE NAME Brake bar.ipt			POS 3.17
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY	
Appropedia	 OHO e.V.	Part	Steel A36	2	
		LICENCE	SCALE	SHEET	
		CC-BY-SA 4.0	1:6	20 /22	



Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Underwater rope guide		FILE NAME Underwater rope guide.ipt			POS 3.18
DEVELOPED BY Appropedia	REDESIGNED BY  OHO e.V.	DOC. TYPE Part	MATERIAL Hardwood	QUANTITY 2	
		LICENCE CC-BY-SA 4.0	SCALE 1:1.5	SHEET 21 /22	



Note: All units in mm.

PROJECT Rope Pump with Depth adjustable		CREATED BY J. Zeron	APPROVED BY A. Morillo	DATE 30/08/2021	VERSION 1.0
PART NAME Piston		FILE NAME Piston.ipt			POS 3.20
DEVELOPED BY Appropedia	REDESIGNED BY OHO e.V.	DOC. TYPE Part	MATERIAL Rubber	QUANTITY 10	
		LICENCE CC-BY-SA 4.0	SCALE 2:1	SHEET 22 /22	