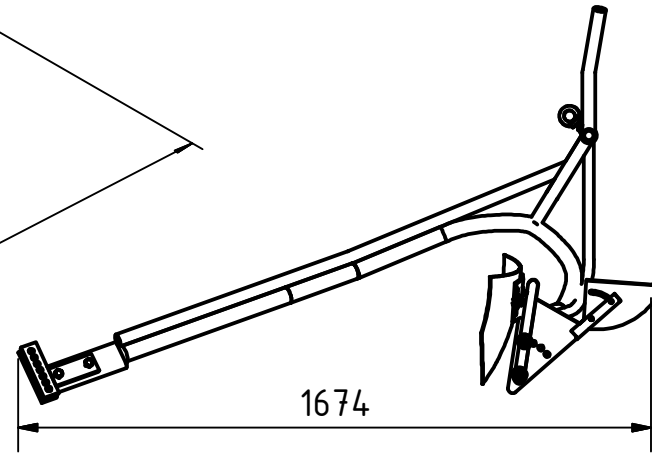
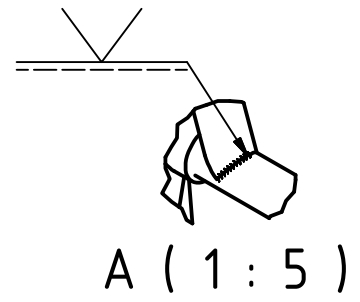
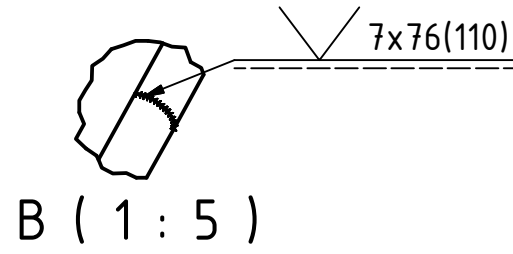
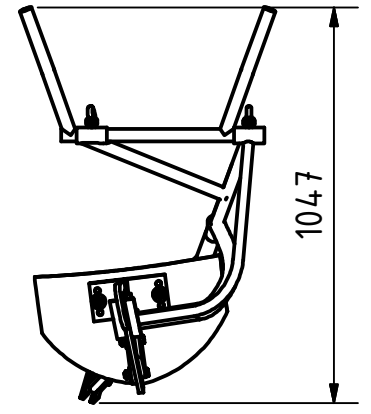


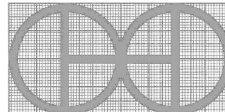
SCALE (1 : 10)

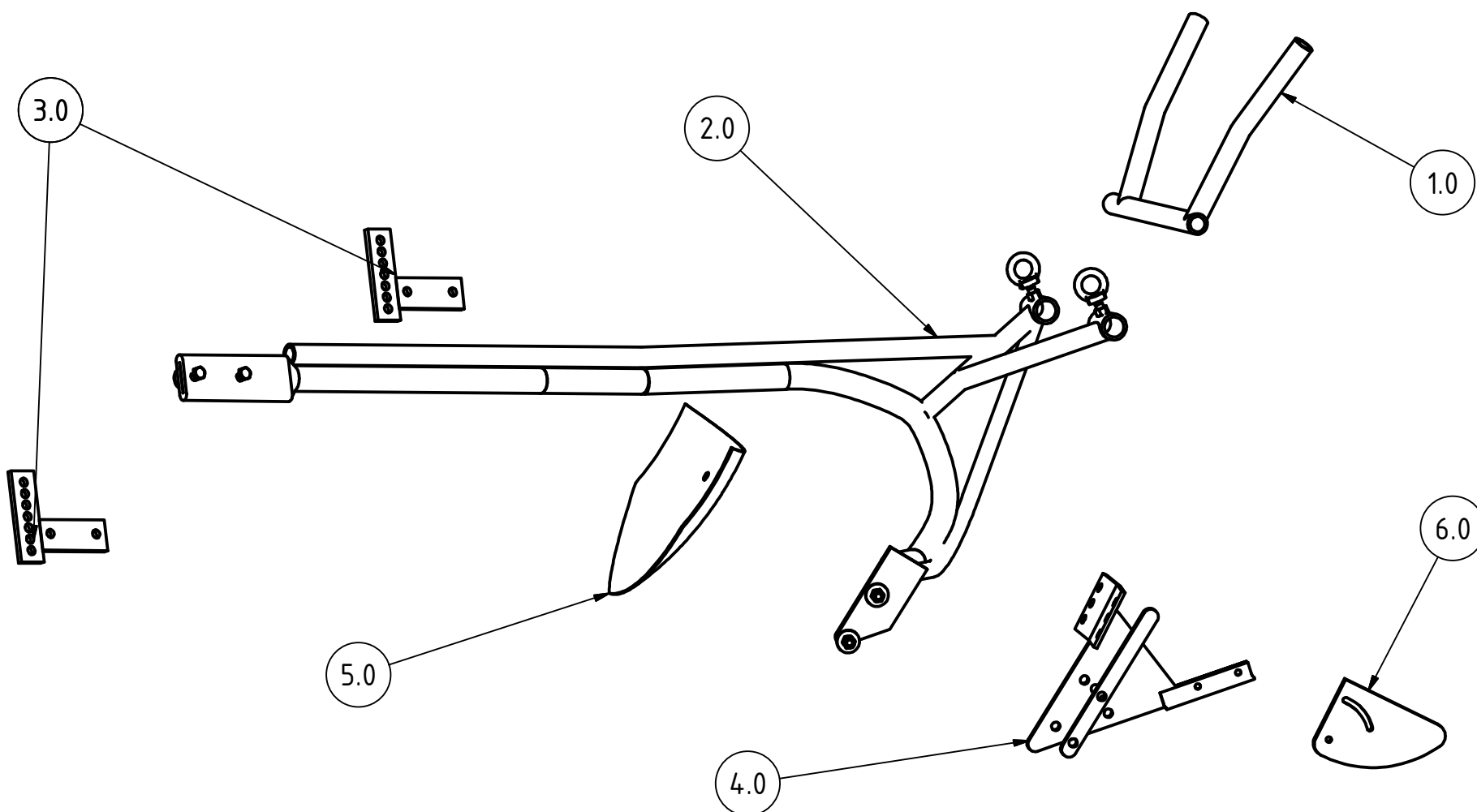


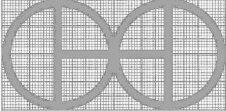
SCALE (1 : 20)



Note: All units in mm.

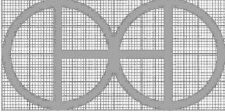
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME	POS		
3d views	pac_odp_ox-drawn_plough	A1		
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
Practical Action	 OHO e.V.	Assembly		1
		LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:20	1 /26



PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME	POS		
Exploded 3d view	pac_odp_ox-drawn_plough	A2		
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Assembly		
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:16	2 /26

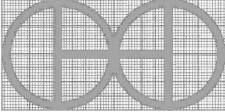
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
A1	1	3D views	3D views			1
A2	1	expoded 3d view	expoded 3d view			2
B1	1	Part List	Part List			3
B2	1	Part List	Part List			4
C1	1	Technical notes	technical notes			5
1.0	1	Handled bar	handled bar.ipn			6
1.1	1	Pipe 660 25	pipe 660 25.ipt	Production	Steel A36 25mm x 0.179mm thickness	7
1.2	2	Pipe 356 25	pipe 356 25.ipt	Production	Steel A36 25mmx 0.179mm thickness	8
2.0	1	Auxiliar frame	auxiliar frame.ipn			9
2.1	1	Pipe 1537 25	pipe 1537 25.ipt	Production	Steel A36 25mm x 0.179mm thickness	10
2.2	2	Pipe adjustment 80 32	pipe adjustment 80 32.ipt	Production	Steel A36 32mm x 0.191mm thickness	11
2.3	1	Pipe 2350 32	pipe 2350 32.ipt	Production	Steel A36 32mm x 0.191mm thickness	12
2.4	1	Pipe 813 19	pipe 813 19.ipt	Production	Steel A36 19mm x 0.154mm thickness	13
2.5	1	Pipe 350 25	pipe 350 25.ipt	Production	Steel A36 25mm x 0.179mm thickness	14
2.6	1	Pipe 700 25	pipe 700 25.ipt	Production	Steel A36 25mm x 0.179mm thickness	15
2.7	1	Plate 178x70x12.5	plate 178x70x12.5.ipt	Production	Steel C45 12.5mm thickness	16
2.8	2	Clamp bolt 12.5		Standard	M12 x 60mm long HEX FLANGE HEAD	
2.9	4	Hex head bolt 12.5		Standard	M12 x 60mm long HEX HEAD	
2.10	4	Washers		Standard	M12 washers Steel A53	
2.11	6	Hex nut 12.5		Standard	M12 nut Steel A53	
3.0	2	Hitch brackets	hitch brackets.ipn			17
3.1	1	Plate 127x51x9.5	plate 127x51x9.5.ipt	Production	Steel C45 9.5mm thickness	18
3.2	1	Plate 152x44x9.5	plate 152x44x9.5.ipt	Production	Steel C45 9.5mm thickness	19
4.0	1	Support	support.ipn			20
4.1	1	Plate 204x102x6.3	plate 204x102x6.3.ipt	Production	Steel C45 6.3mm thickness	21
4.2	1	Plate 254x40Gx12.5	plate 254x40Gx12.5.ipt	Production	Steel C45 12.5mm thickness	22
4.3	1	Square angle 25x25x3	square angle 25x25x3.ipt	Production	Steel A36 ANGLE 25mm x 25mm	23
4.4	1	Plate 354x25x12.5	plate 354x25x12.5.ipt	Production	Steel C45 12.5mm thickness	24
4.5	2	Hex head bolt 12.5		Standard	M12 x 55mm long HEX HEAD	
4.6	2	Washers		Standard	M12 washers Steel A53	
4.7	2	Hex nut 12.5		Standard	M12 nut Steel A53	

PROJECT		CREATED BY		APPROVED BY		DATE		VERSION		
Ox-drawn Plough		L. Ruda		A. Morillo		09/09/2021		1.0		
PART NAME			FILE NAME				POS			
Parts list			pac_odp_ox-drawn_plough				B1			
DEVELOPED BY			REDESIGNED BY			DOC. TYPE		MATERIAL		QUANTITY
						Parts list				
Practical Action			OHO e.V.			LICENCE		SCALE		SHEET
						CC-BY-SA 4.0				3 /26

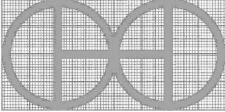
Parts list

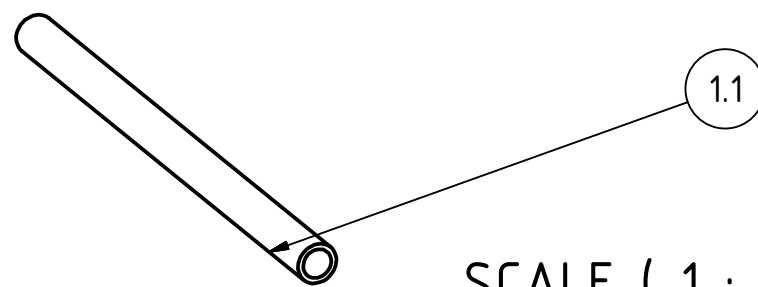
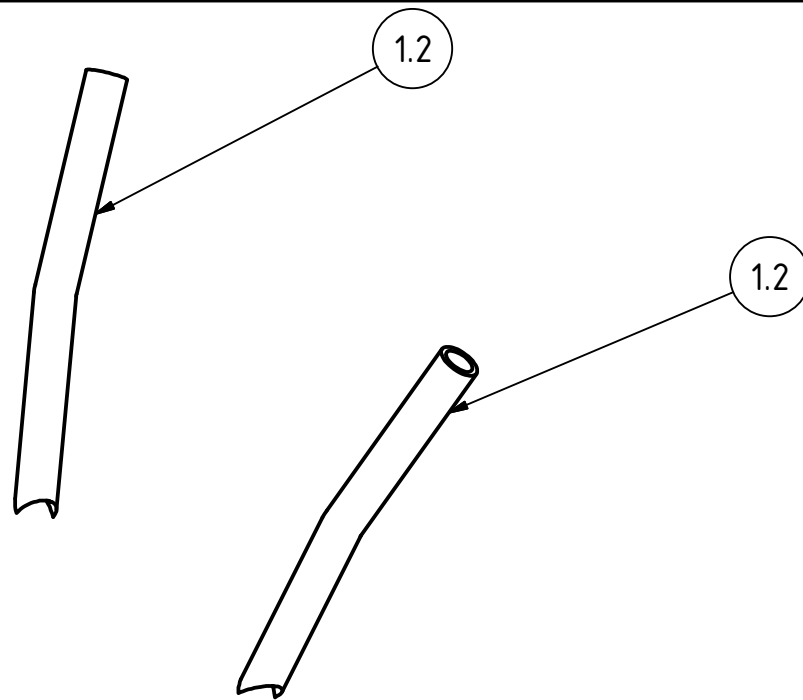
POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
5.0	1	Knife	knife.ipt	Production	Steel C45 Hardened	25
6.0	1	Rudder 203x127x5	rudder 203x127x5.ipt	Production	Steel C45 5mm thickness	26

PROJECT		CREATED BY		APPROVED BY		DATE		VERSION	
Ox-drawn Plough		L. Ruda		A. Morillo		09/09/2021		1.0	
PART NAME				FILE NAME				POS	
Parts list				Parts list				4.0	
DEVELOPED BY			REDESIGNED BY			DOC. TYPE	MATERIAL		QUANTITY
Practical Action						Parts list			
						LICENCE			
			OHO e.V.			CC-BY-SA 4.0			4 /26

TECHNICAL NOTES

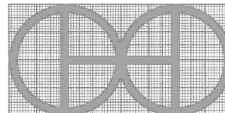
NOTES	CONTENT
GENERAL NOTES	
Metal structure treatment	Iron structures should be painted to prevent rust and improve equipment life. - Remove loose rust with a wire brush, sandpaper or chemical rust remover. - If applicable, sand areas where paint is chipping until surface is smooth. - Remove dust or oil with a degreaser or denatured alcohol. - Prime surface to protect against rust and corrosion
Parts to buy	- Clamp bolt 12.5 Screw Ring M12 GOST 4751-73 Standard CSN 02 1369 M12 - Hex nut 12.5 AS 1112 - M12 Type 5 Standard AS 1112 METRIC M12 - Hex head bolt 12.5 ANSI B18.2.3.5M - M12 x 1,75 x 55 Standard Hex Bolt - Washers AS 1237 - 12 mm Standard Flat metal washers for general engineering purposes (metric series)
	-
...	...
...	...

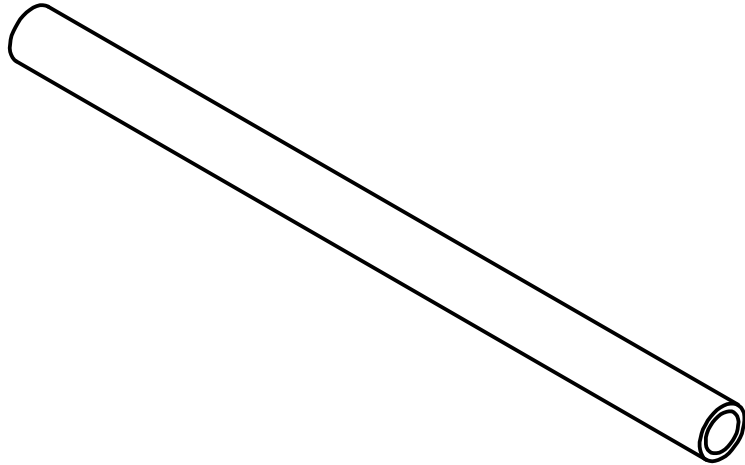
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Technical notes	pac_odp_ox-drawn_plough			C1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Technical notes		
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0		5 /26



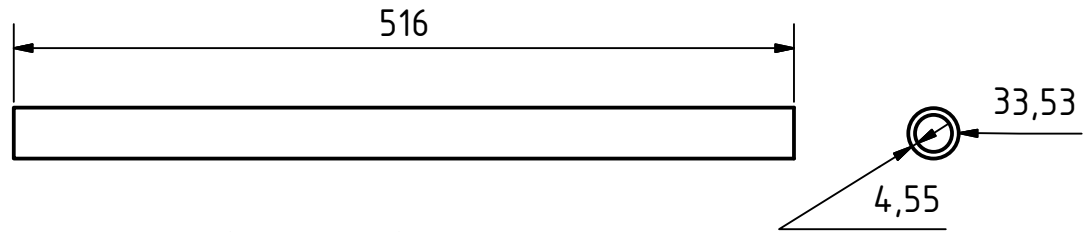
SCALE (1 : 6)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Handled bar	Handled bar.ipn			1.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Assembly		1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:6	6 /26

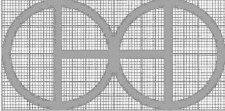


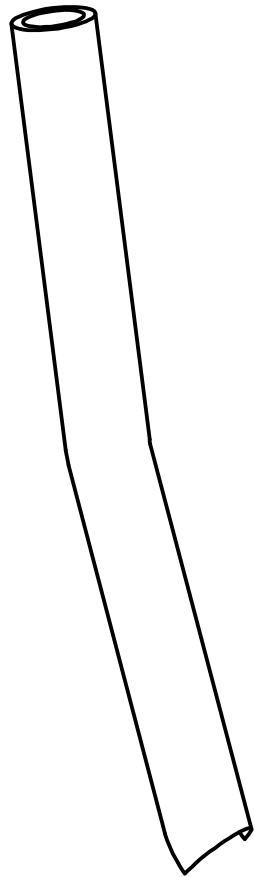
SCALE (1 : 4)



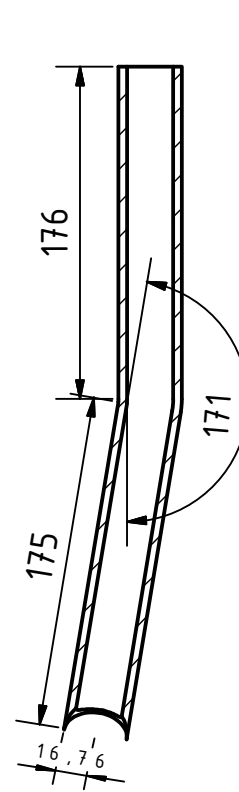
SCALE (1 : 5)

Note: All units in mm.

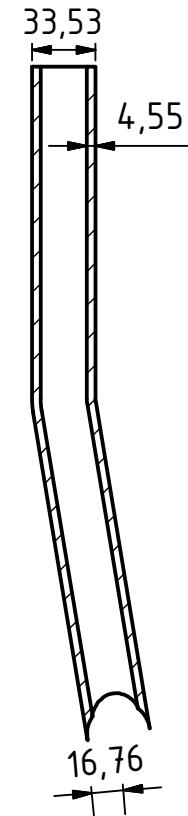
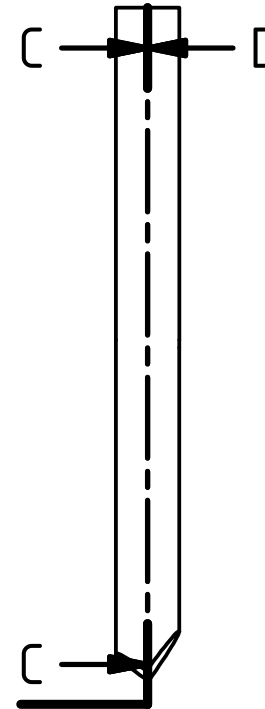
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Pipe 660 25	Pipe 660 25.ipt			1.1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:5	7 /26



SCALE (1 : 3)

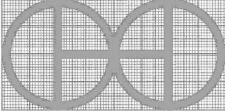


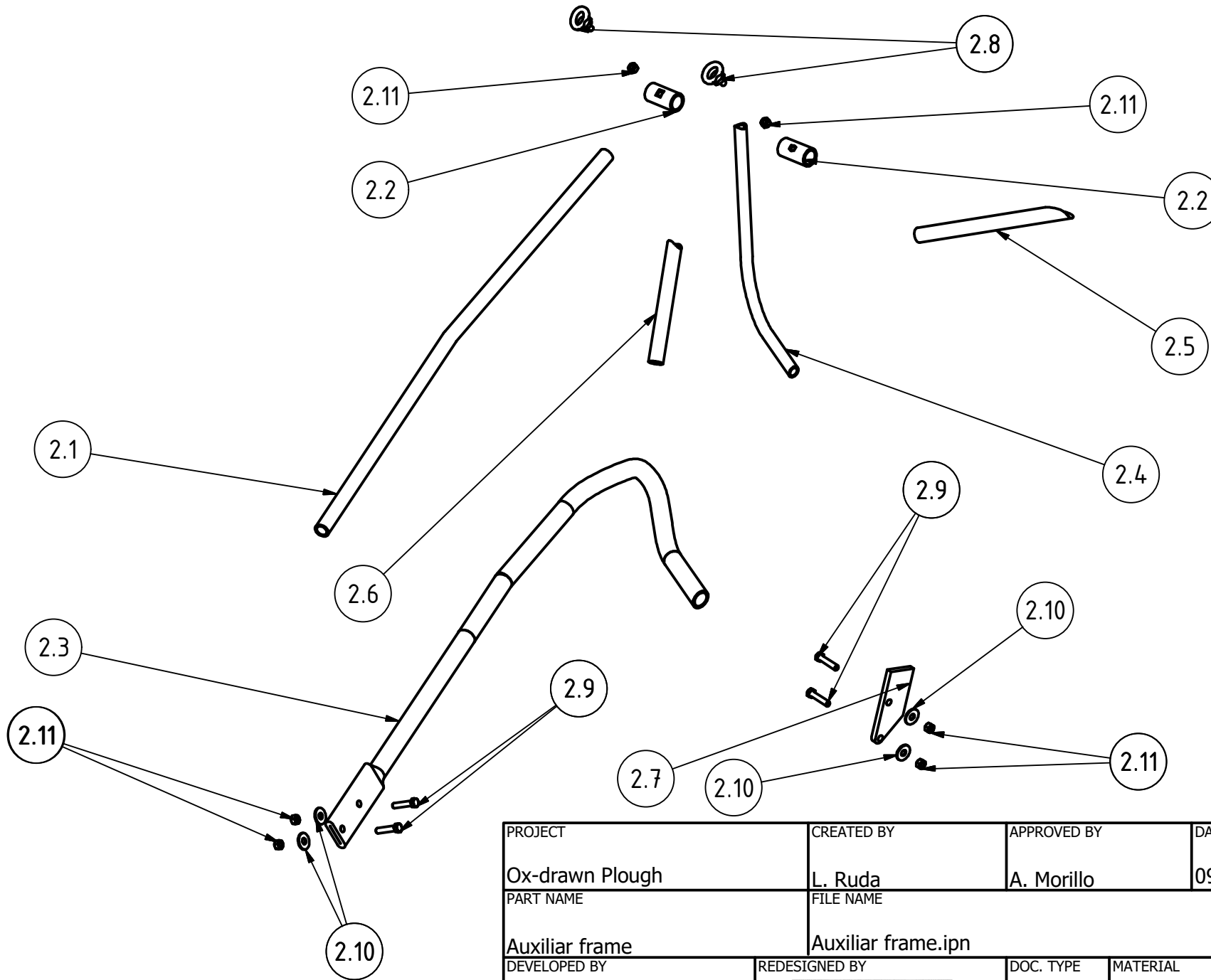
D-D (1 : 4)



C-C (1 : 4)

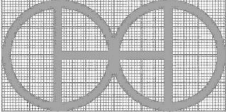
Note: All units in mm.

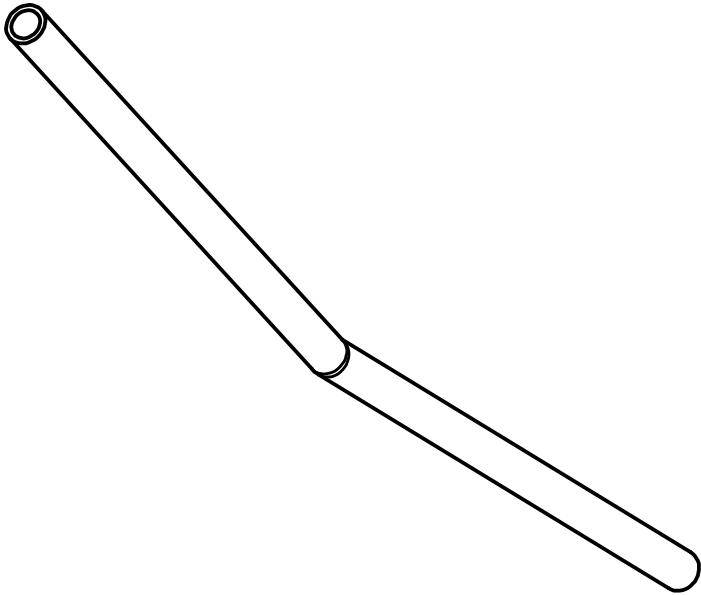
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME	POS		
Pipe 356 25	Pipe 356 25.ipt	1.2		
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:4	8 / 26



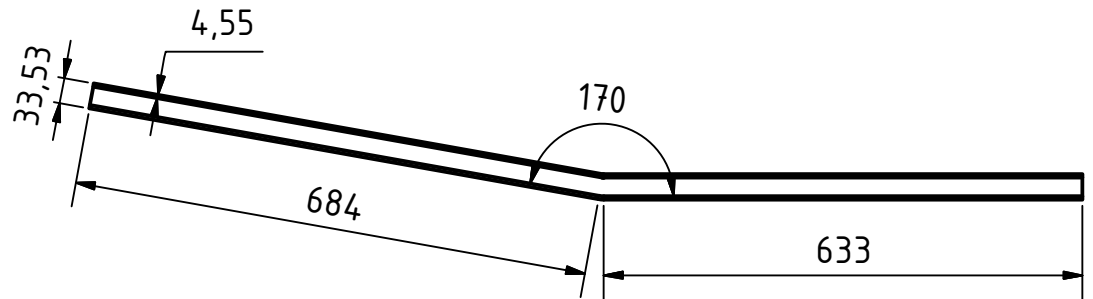
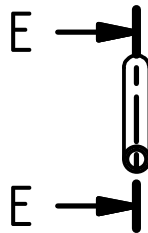
SCALE (1 : 12)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Auxiliar frame	Auxiliar frame.ipn			2.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Assembly		1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:12	9 /26

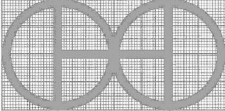


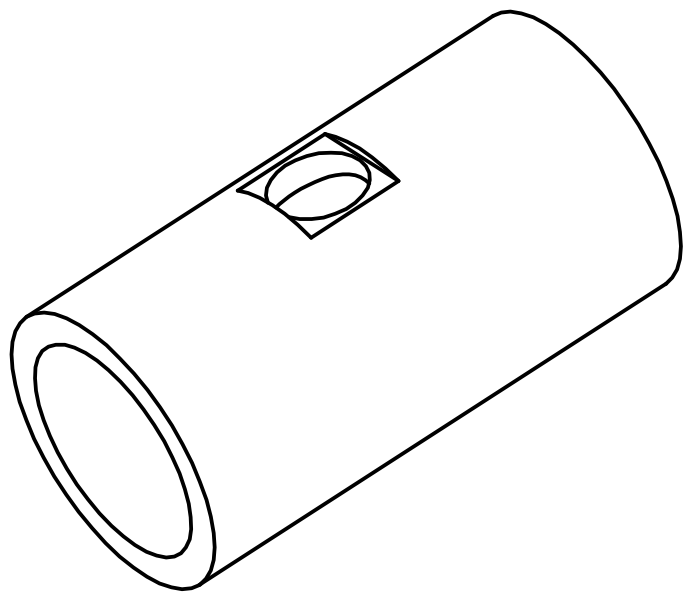
SCALE (1 : 6)



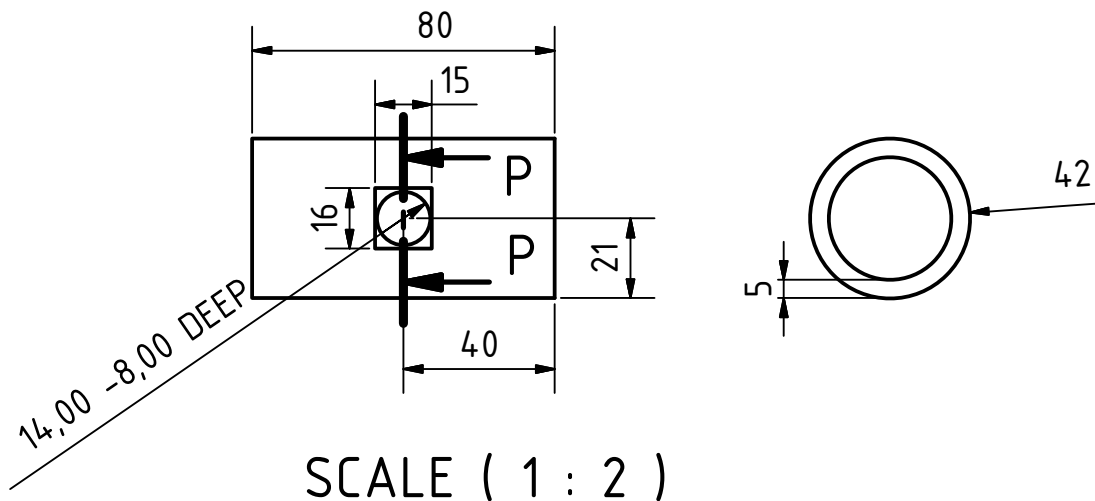
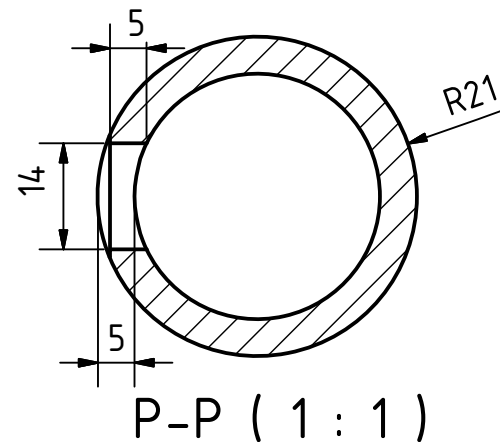
E-E (1 : 10)

Note: All units in mm.

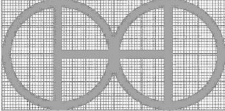
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
pipe 1537 25	pipe 1537 25.ipt			2.1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:10	10 /26

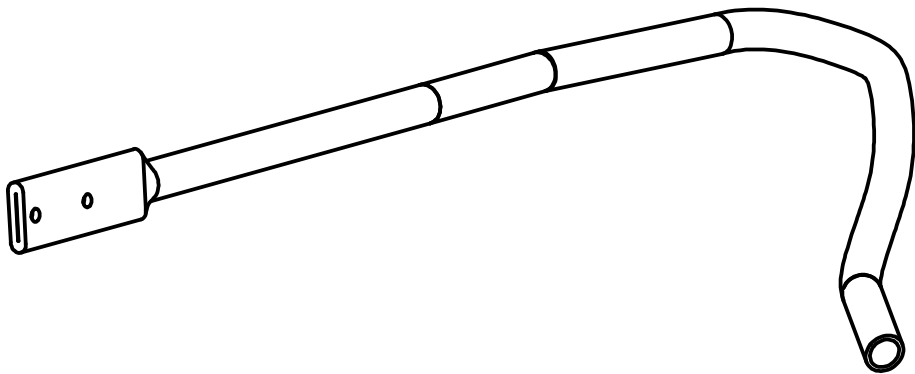


SCALE (1 : 1)

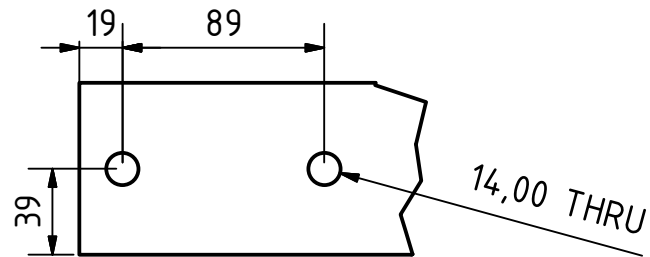


Note: All units in mm.

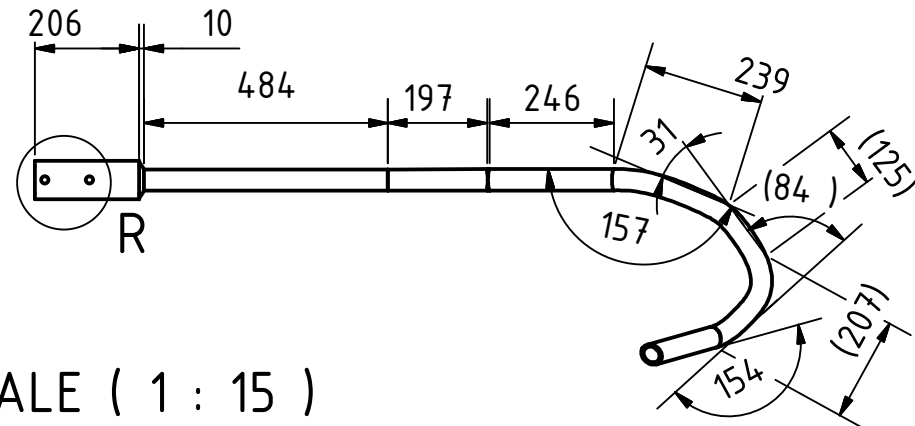
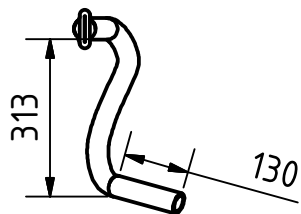
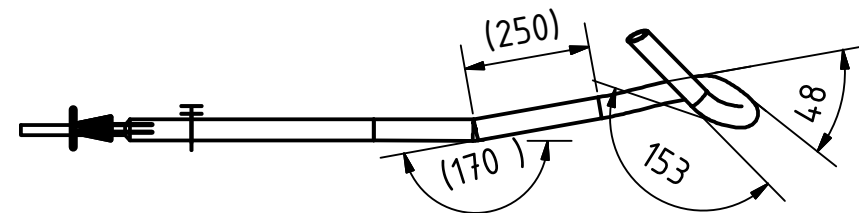
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
pipe adjustment 80 32 A	pipe adjustment 80 32 A.ipt			2.2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	2
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:2	11 /26



SCALE (1 : 8)

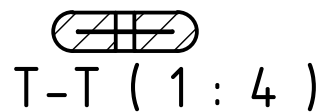


R (0,30 : 1)

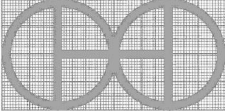


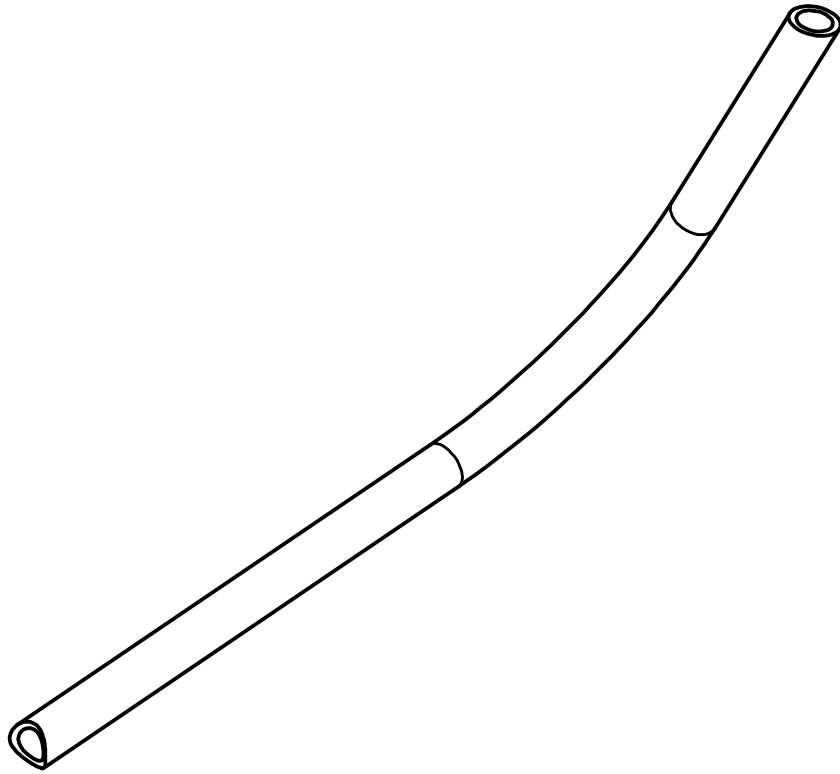
SCALE (1 : 15)

COMPRESSED TUBE SECTION

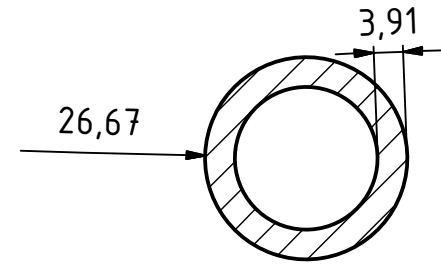
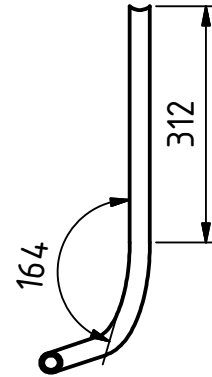
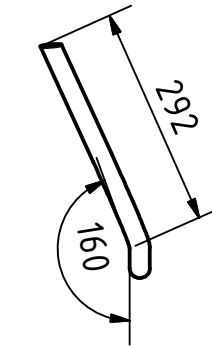


Note: All units in mm.

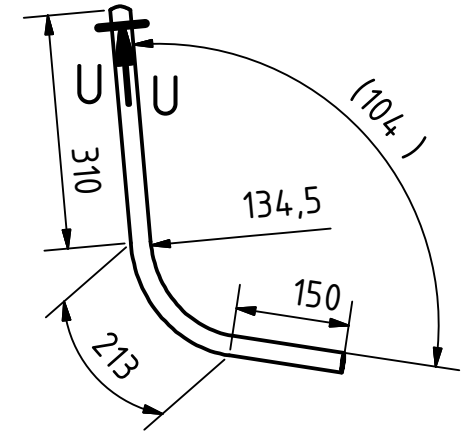
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Pipe 2350 32	Pipe 2350 32.ipt			2.3
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:15	12 /26



SCALE (1 : 4)

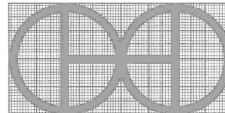


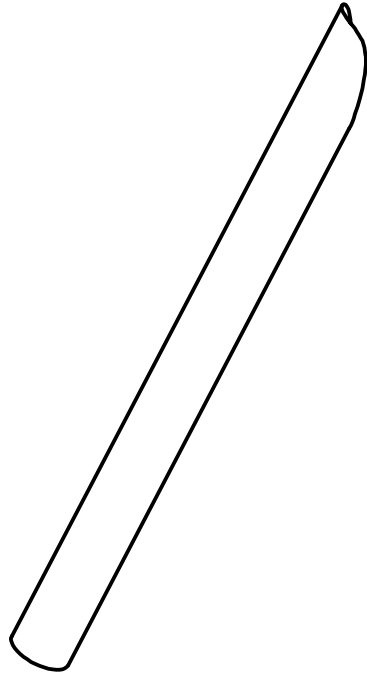
U-U (1 : 1)



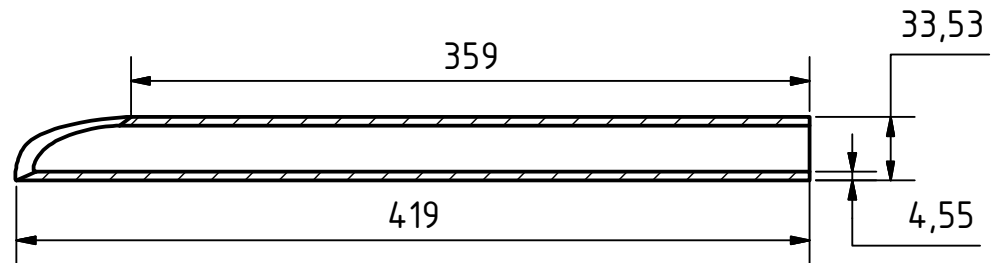
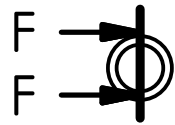
SCALE (1 : 10)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Pipe 813 19	Pipe 813 19.ipt			2.4
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:10	13 /26

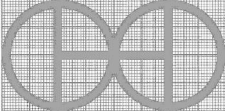


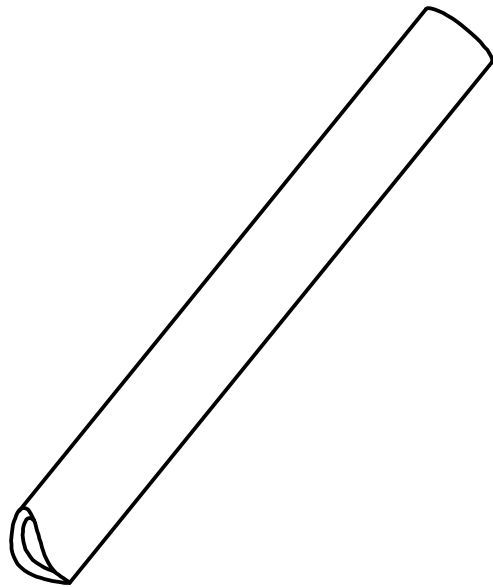
SCALE (1 : 4)



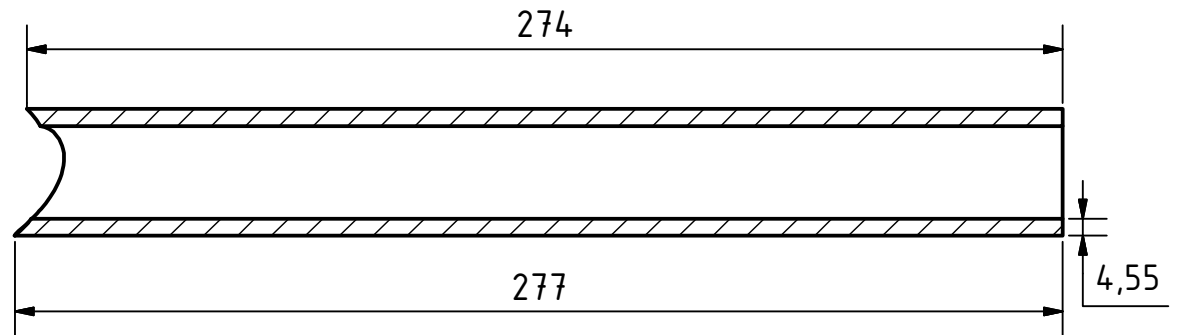
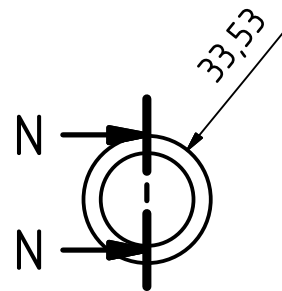
F-F (1 : 4)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Pipe 700 25	Pipe 700 25.ipt			2.5
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:4	14 /26

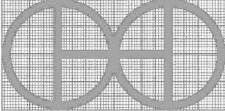


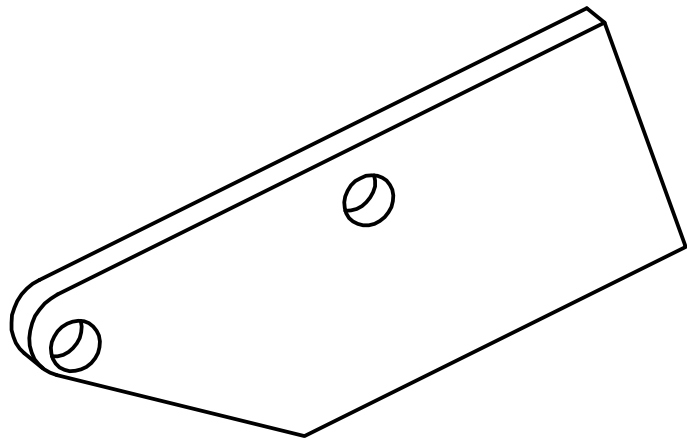
SCALE (1 : 3)



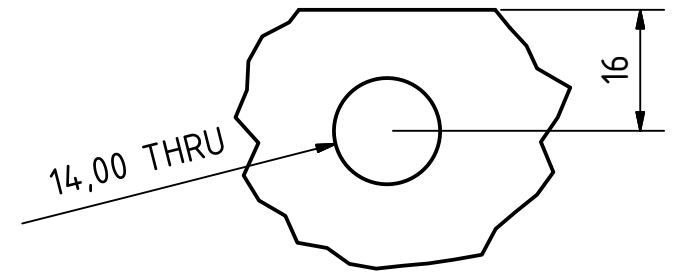
N-N (1 : 2)

Note: All units in mm.

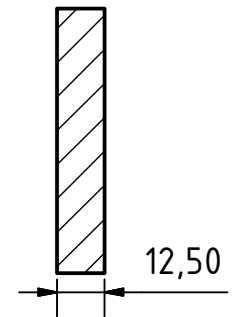
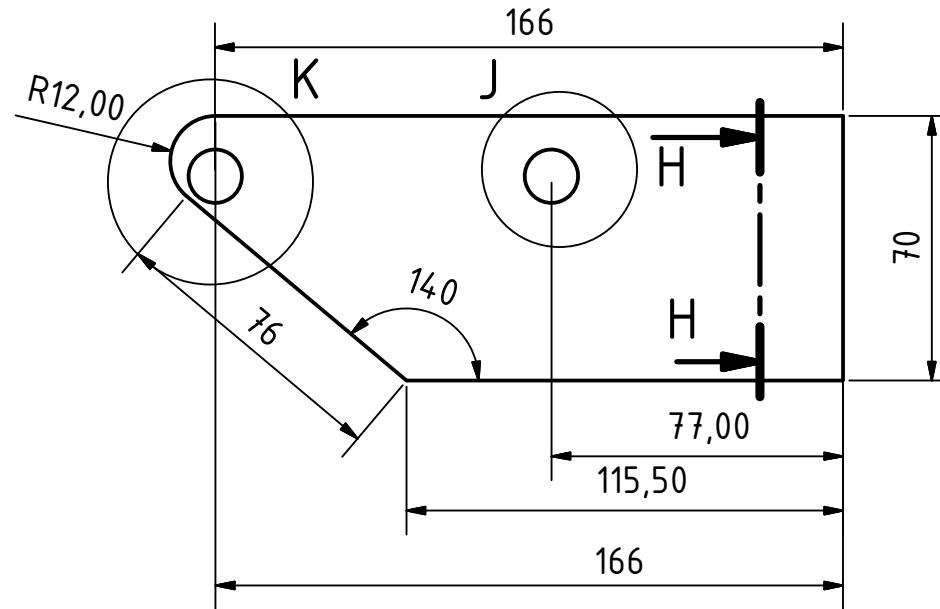
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Pipe 350 25	Pipe 350 25.ipt			2.6
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:2	15 / 26



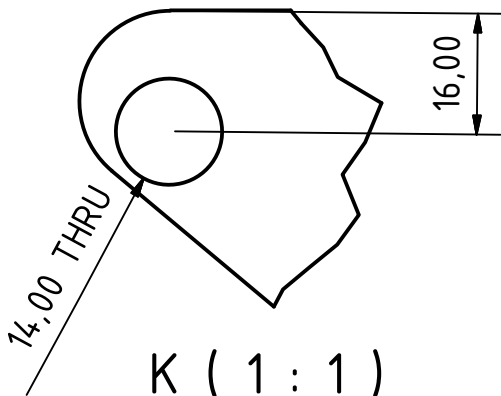
SCALE (1 : 2)



J (1 : 1)

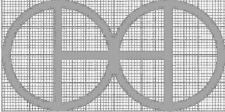


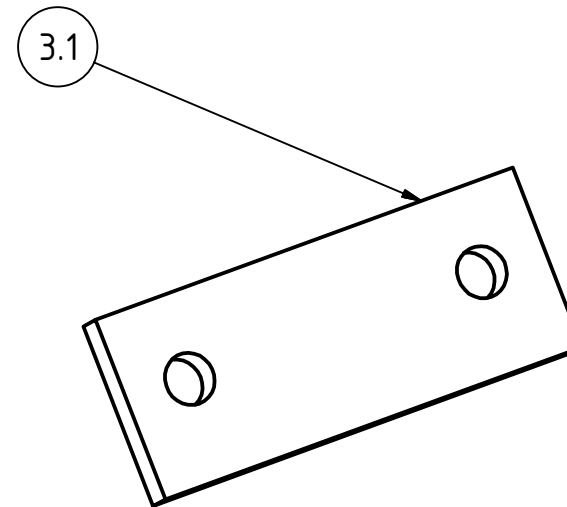
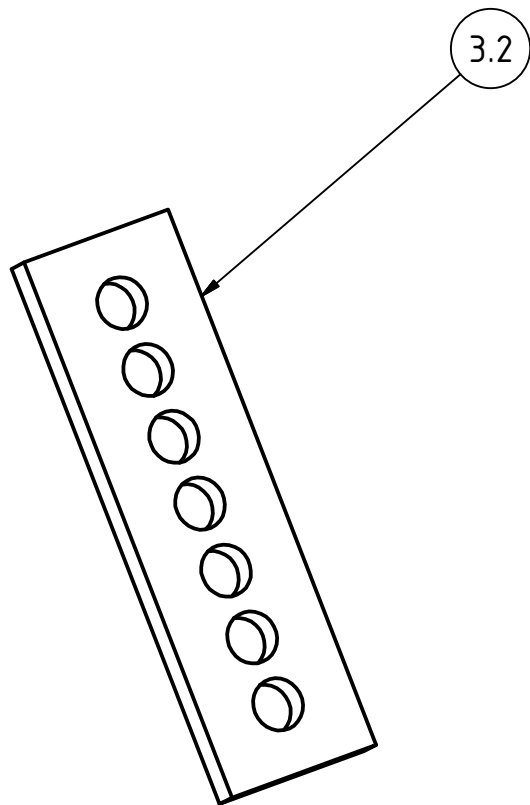
H-H (1 : 2)



K (1 : 1)

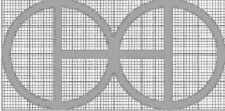
Note: All units in mm.

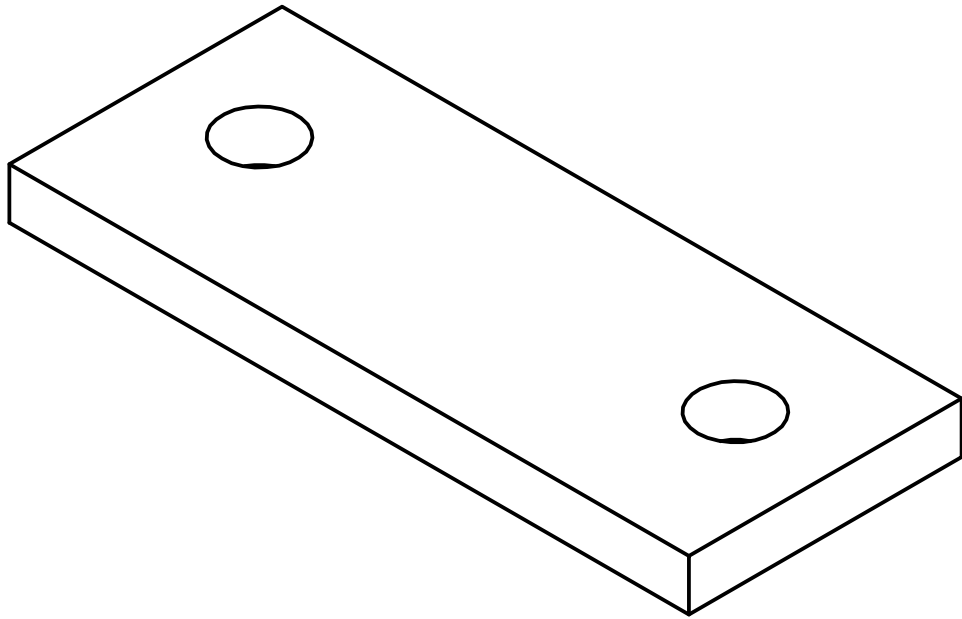
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 178x70x12.5	Plate 178x70x12.5.ipt			2.7
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:2	16 / 26



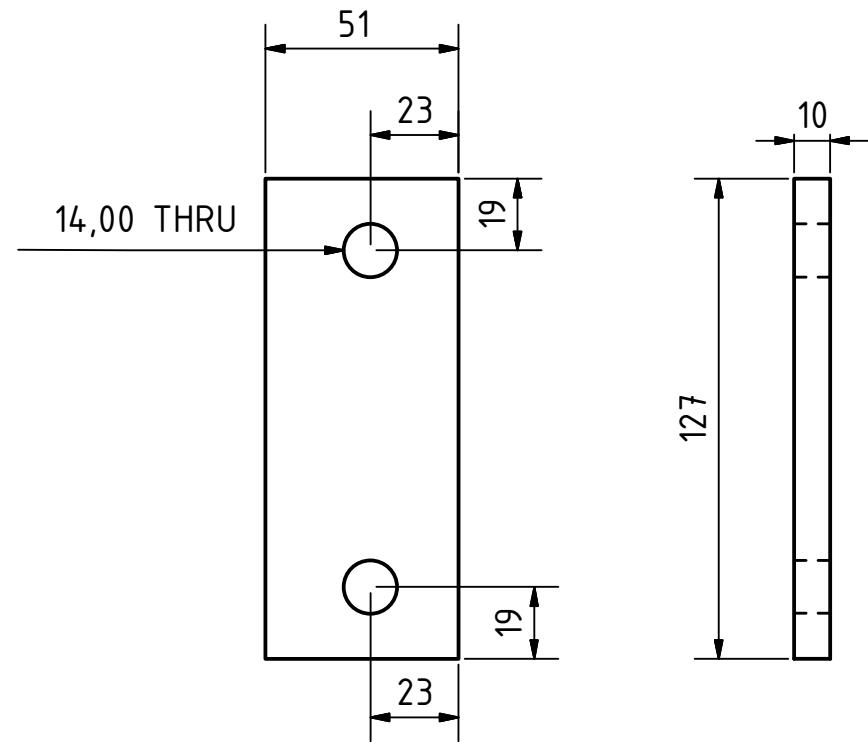
SCALE (1 : 2)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Hitch brackets	Hitch brackets.ipn			3.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
Practical Action	 OHO e.V.	Assembly		2
		LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:2	17 /26

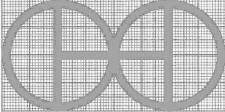


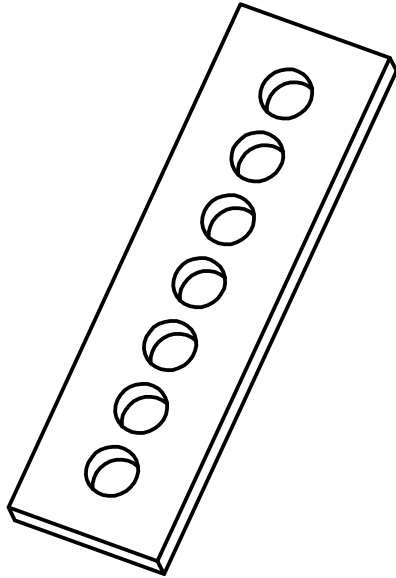
SCALE (1 :1)



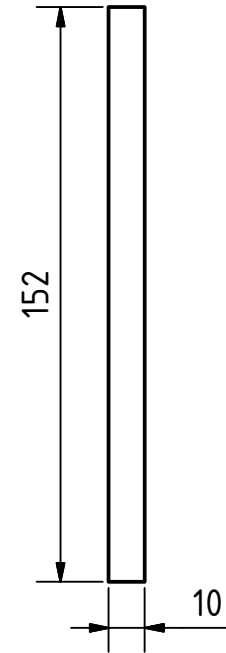
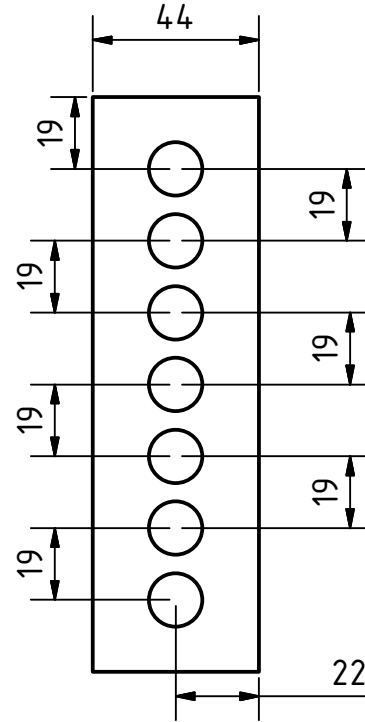
SCALE (1 :2)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 127x51x9.5	Plate 127x51x9.5.ipt			3.1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:2	18 /26

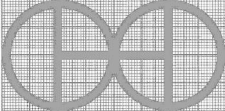


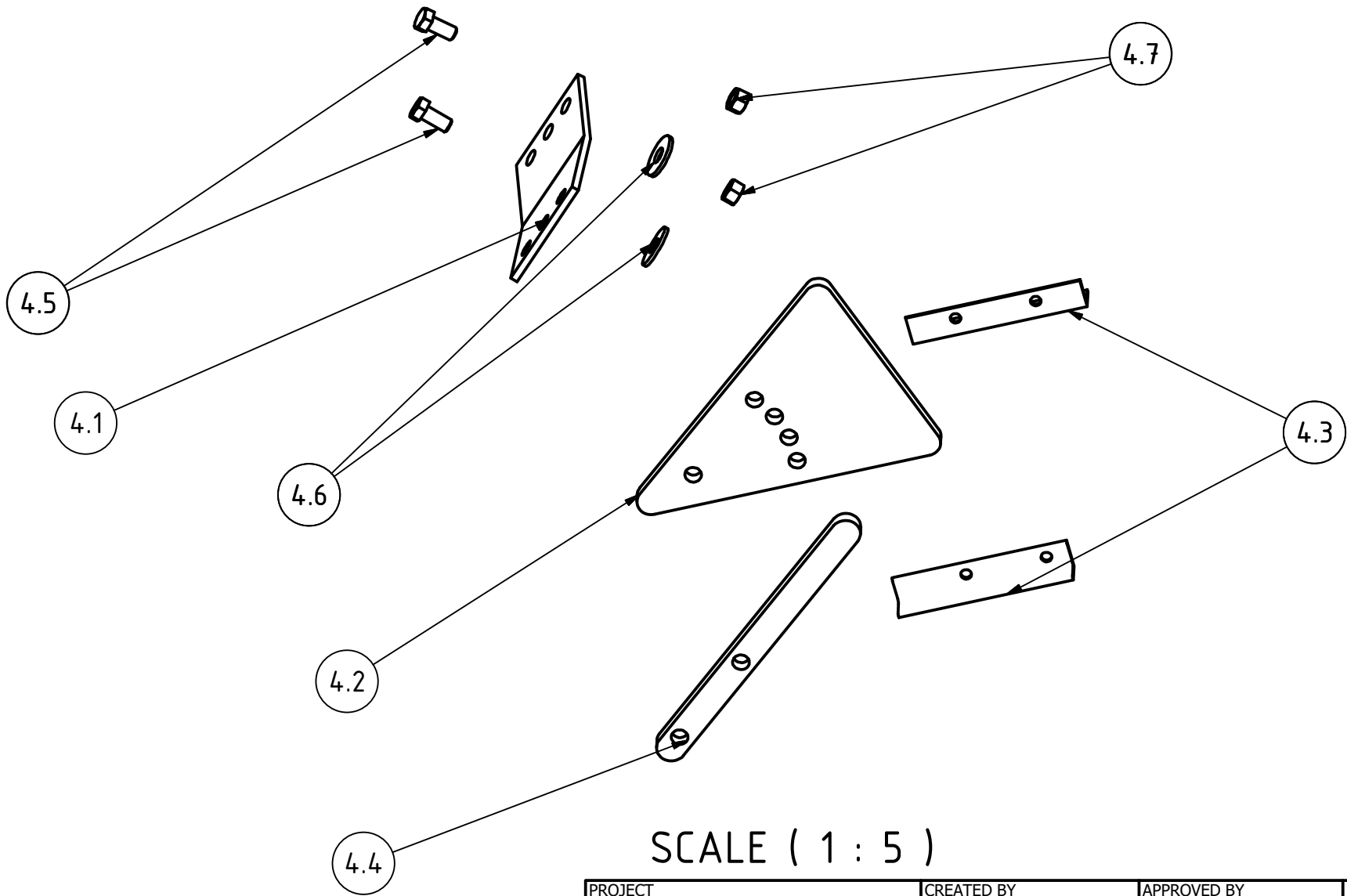
SCALE (1 : 2)



SCALE (1 : 2)

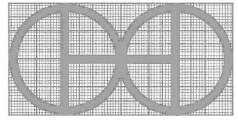
Note: All units in mm.

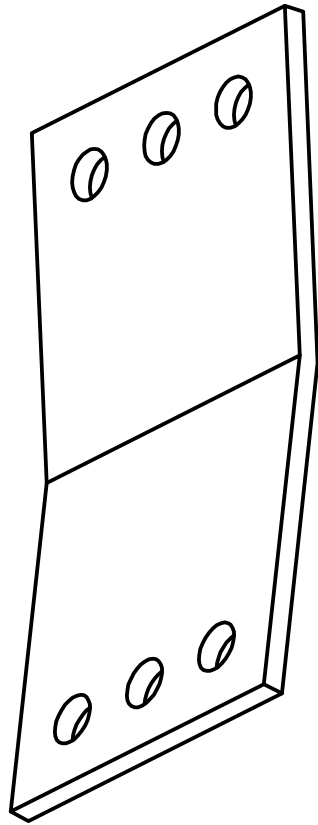
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 152x44x9.5	Plate 152x44x9.5.ipt			3.2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:2	19 /26



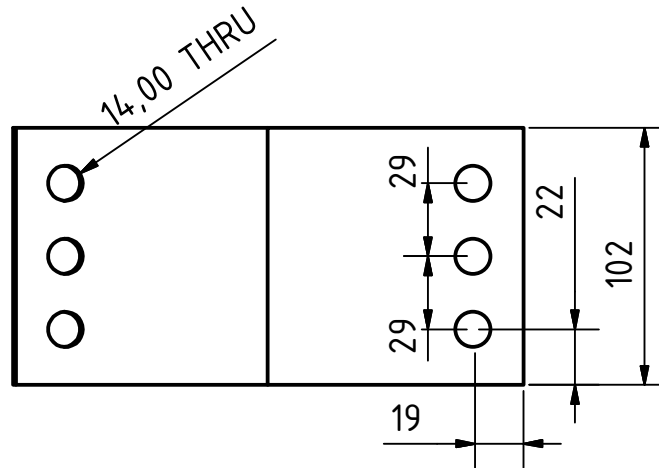
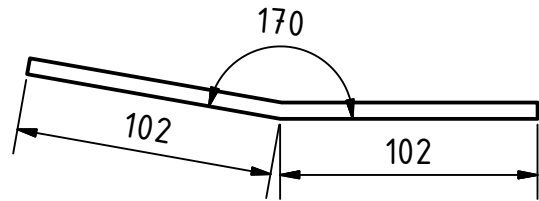
SCALE (1 : 5)

Note: All units in mm.

PROJECT		CREATED BY		APPROVED BY		DATE		VERSION	
Ox-drawn Plough		L. Ruda		A. Morillo		09/09/2021		1.0	
PART NAME			FILE NAME					POS	
Support			Support.ipn					4.0	
DEVELOPED BY			REDESIGNED BY			DOC. TYPE	MATERIAL		QUANTITY
Practical Action			 OHO e.V.			Assembly			1
						LICENCE			SCALE
						CC-BY-SA 4.0		1:5	20 /26

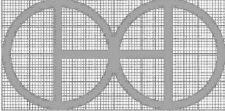


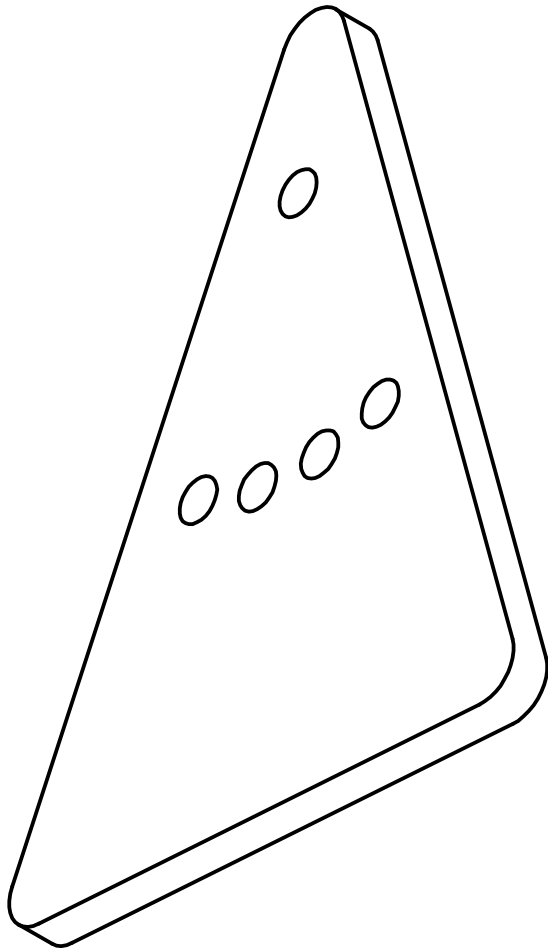
SCALE (1 : 2)



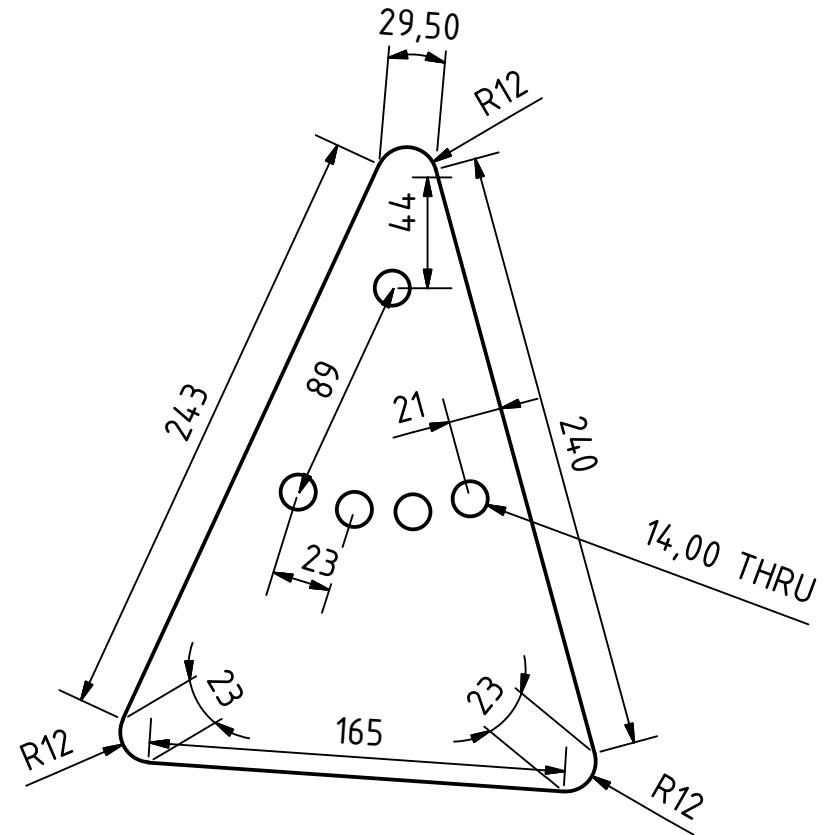
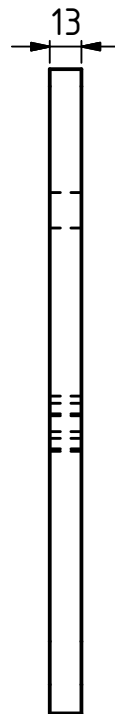
SCALE (1 : 3)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 204x102x6.3	Plate 204x102x6.3.ipt			4.1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:3	21 / 26

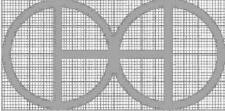


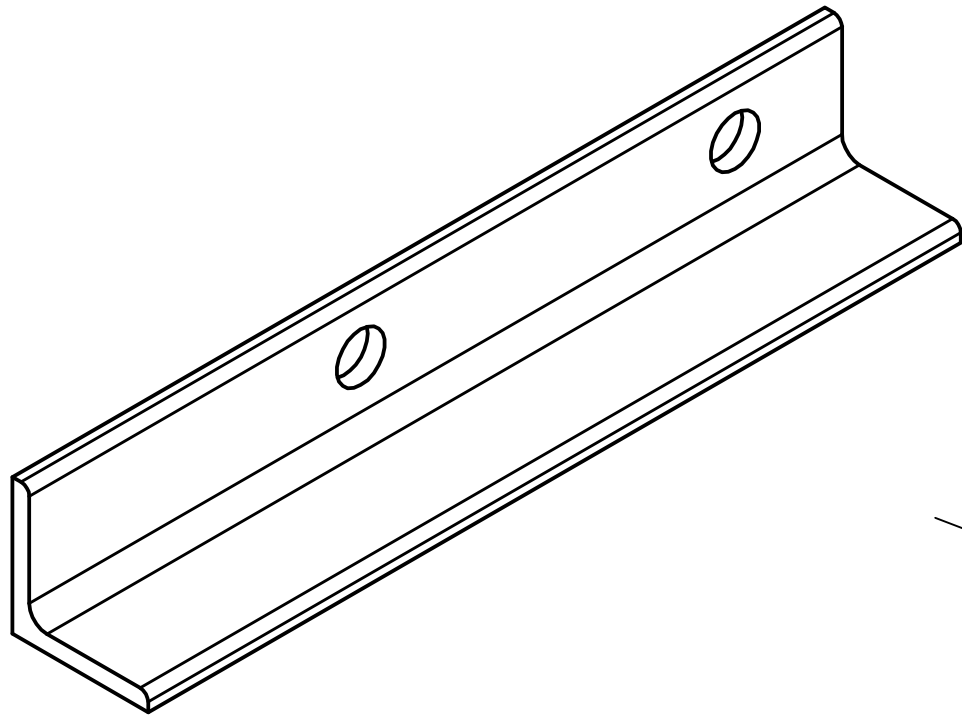
SCALE (1 : 2)



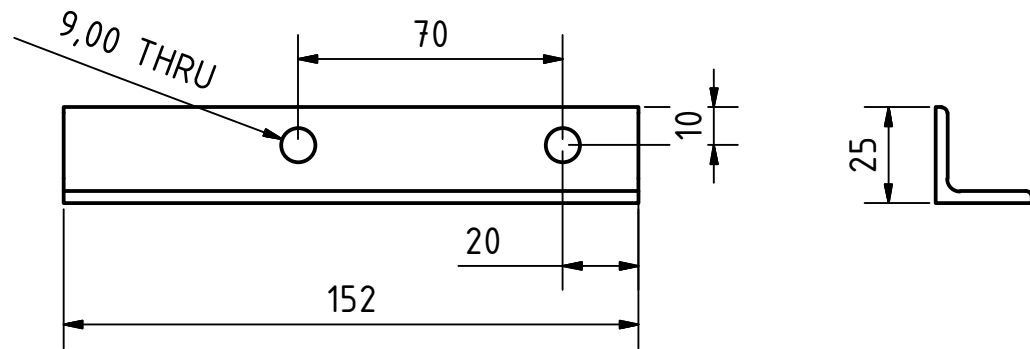
SCALE (1 : 3)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 254x40Gx12.5	Plate 254x40Gx12.5.ipt			4.2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:3	22 /26

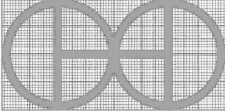


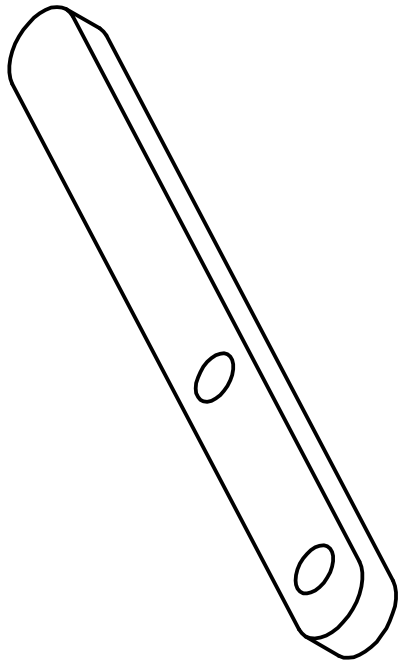
SCALE (1 :1)



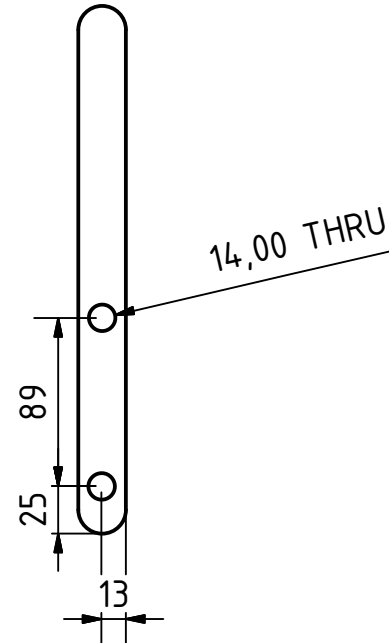
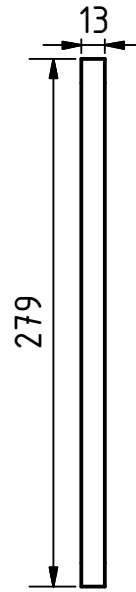
SCALE (1 :2)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Square angle 25x25x3	Square angle 25x25x3.ipt			4.3
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:2	23 /26

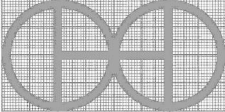


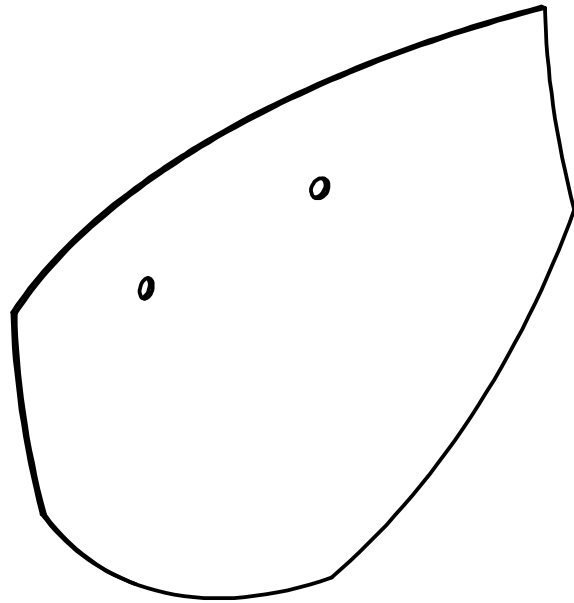
SCALE (1 : 2)



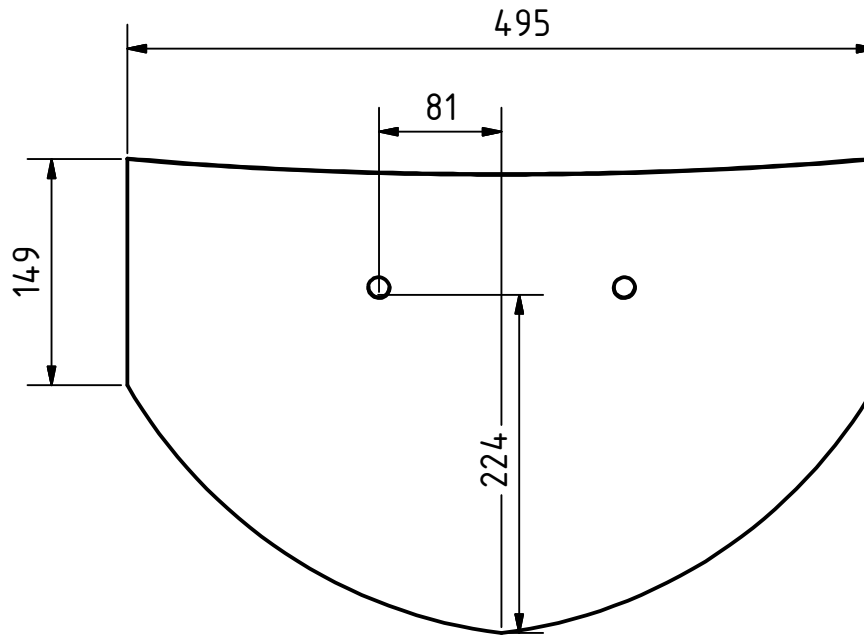
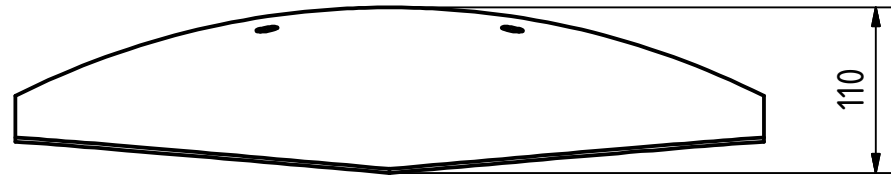
SCALE (1 : 4)

Note: All units in mm.

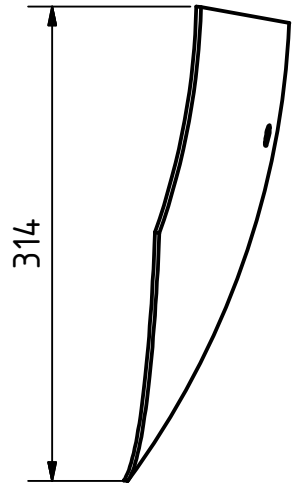
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Plate 354x25x12.5	Plate 354x25x12.5.ipt			4.4
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:4	24 / 26



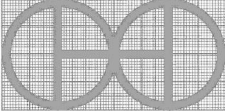
SCALE (1 : 5)

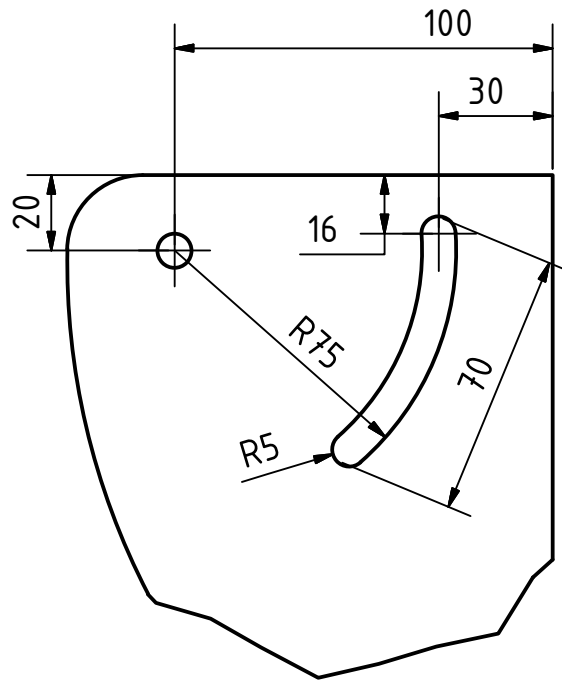


SCALE (1 : 5)

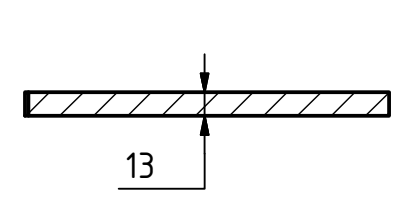


Note: All units in mm.

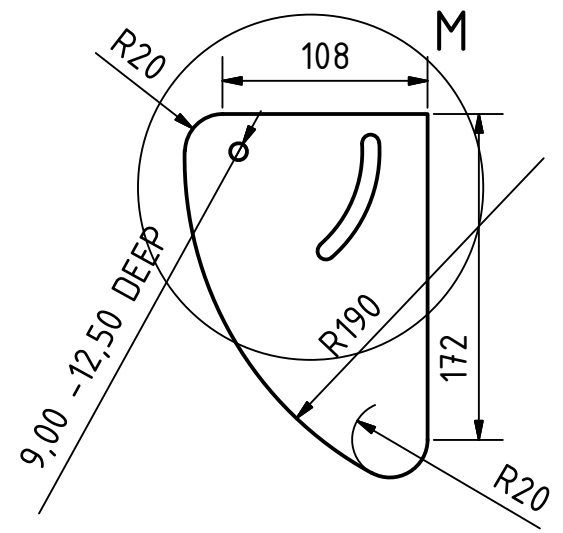
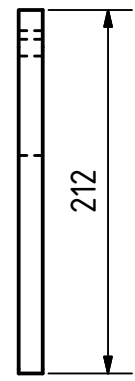
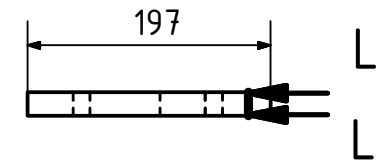
PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
Knife	Knife.ipt			5.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel C45 Hardened	1
Practical Action	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0	1:5	25 /26



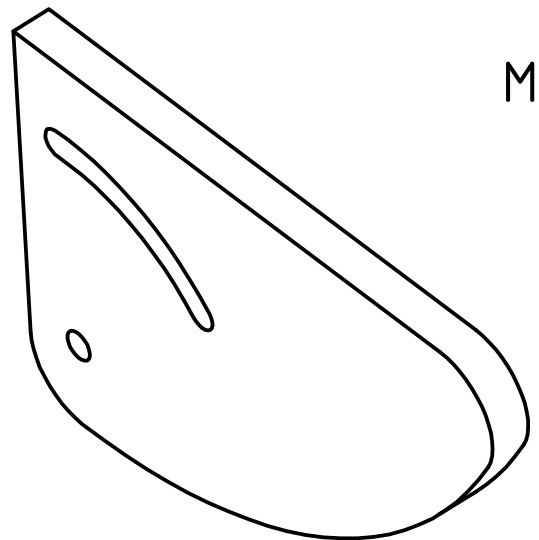
M (1 : 2)



L-L (1 : 4)

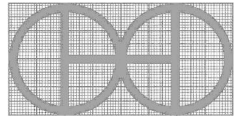


SCALE (1 : 4)



SCALE (1 : 2)

Note: All units in mm.

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Ox-drawn Plough	L. Ruda	A. Morillo	09/09/2021	1.0
PART NAME	FILE NAME			POS
rudder 203x127x5	rudder 203x127x5.ipt			6.0
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Part	Steel A36	1
		LICENCE	SCALE	SHEET
Practical Action	OHO e.V.	CC-BY-SA 4.0	1:4	26 /26