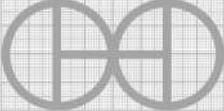


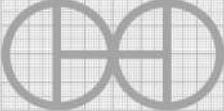
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
A1	1	3d views	pac_aft_axial-flow-turbine.iam			1
A1	1	3d views	pac_aft_axial-flow-turbine.iam			2
A2	1	Exploded 3d view	pac_aft_axial-flow-turbine.ipn			3
B1	1	Parts list	pac_aft_axial-flow-turbine.csv			4
B2	1	Parts list	pac_aft_axial-flow-turbine.csv			5
B3	1	Parts list	pac_aft_axial-flow-turbine.csv			6
B4	1	Parts list	pac_aft_axial-flow-turbine.csv			7
C1	1	Technical notes				8
1.0	1	Alignment of vanes assembly	Alignment of vanes assembly.iam			9-10
1.1	1	Alignment of vanes	Alignment of vanes.ipt	Production	DIN C45	11
1.2	1	Alignment of vanes 1	Alignment of vanes 1.ipt	Production	DIN C45	12
1.3	1	Alignment of vanes 2	Alignment of vanes 2.ipt	Production	DIN C45	13
1.4	1	Inlet cone	Inlet cone.ipt	Production	DIN C45	14
1.5	1	Ring	Ring.ipt	Production	DIN C45	15
1.6	24	Vane	Vane.ipt	Production	DIN C45	16
1.7	16	Alignment of vanes bolt M14		Standard	DIN 933 M14x28x1.5	
1.8	16	Alignment of vanes washer		Standard	DIN 125-1 A A 15	
2.0	1	Propeller assembly	Propeller assembly.iam			17-18
2.1	1	Propeller	Propeller.ipt	Production	DIN C45	19
2.2	1	Cone	Cone.ipt	Production	DIN C45	20
2.3	3	Hexagon Socket Set Screw		Standard	Hexagonal 6.35"x22.225"	
3.0	1	Propeller cover assembly	Propeller cover assembly.iam			21-22
3.1	1	Propeller cover	Propeller cover.ipt	Production	DIN C45	23
3.2	1	Propeller cover top	Propeller cover top.ipt	Production	DIN C45	24
3.3	6	Fixed vane	Fixed vane.ipt	Production	DIN C45	25
3.4	1	Flange cover	Flange cover.ipt	Production	DIN C45	26
3.5	12	Cover bolt M18		Standard	DIN 933 M18X35x1.5	
3.6	12	Cover nut M18		Standard	DIN 555 M18	
3.7	24	Cover washer		Standard	DIN 433-1 A 19	
4.0	1	Drive pulley assembly	Drive pulley assembly.iam			27-28
4.1	1	Drive pulley	Drive pulley.ipt	Production	DIN C45	29

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Axial flow turbine 25kW	J. Rosciano	A. Morillo	10/08/2021	1.2
PART NAME	FILE NAME			POS
Parts list	pac_aft_axial-flow-turbine.csv			B1
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Parts list		
Practical Action, Perú	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0		4 /101

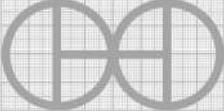
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
4.2	1	Drive pulley 1	Drive pulley 1.ipt	Production	DIN C45	30
4.3	1	Adjusting cone	Adjusting cone.ipt	Production	DIN C45	31
4.4	3	V-Belt transmision		Buy	ANSI/RMA IP-22 5VX500	
4.5	3	Drive pulley bolt M14		Standard	DIN 933 M14x45x15	
5.0	1	Shaft	Shaft.ipt	Production	OD 60 DIN C45	32
6.0	1	Bearings bottom	Bearings bottom.iam			33-34
6.1	1	Bearings	Bearings.ipt	Production	DIN C45	35
6.2	1	Bearing 1	Bearing 1.ipt	Production	DIN C45	36
6.3	1	Bearing 60		Buy	SKF 22313	
6.4	8	Bearing bolt M8		Standard	DIN 933 M8x25x1.5	
6.5	4	Bearing stud M14		Standard	UNI 5910 M14x35x1.5	
6.6	4	Bearing nut M14		Standard	DIN 555 M14	
6.7	4	Bearing washer		Standard	DIN 433-1 A 15	
7.0	1	Bearing top assembly	Bearing top assembly.iam			37-38
7.1	1	Bearings	Bearings.ipt	Production	DIN C45	39
7.2	1	Bearings 2	Bearings 2.ipt	Production	DIN C45	40
7.3	1	Bearing 60		Buy	SKF 22313	
7.4	8	Bearing bolt M8		Standard	DIN 933 M8x25x1.5	
7.5	4	Bearing bolt M14		Standard	DIN 933 M14x50x1.5	
7.6	4	Bearing nut M14		Standard	DIN 555 M14	
7.7	8	Bearing washer		Standard	DIN 433-1 A 15	
8.0	1	Seal housing assembly	Seal housing assembly.iam			41-42
8.1	1	Seal housing	Seal housing.ipt	Production	DIN C45	43
8.2	1	Seal housing out	Seal housing out.ipt	Production	DIN C45	44
8.3	1	Seal housing support 155	Seal housing support 155.ipt	Production	DIN C45	45
8.4	1	Seal housing support 450	Seal housing support 450.ipt	Production	DIN C45	46
8.5	4	Seal housing bolt M10x25		Standard	DIN 933 M10x28x1.5	
8.6	4	Seal housing bolt M10x40		Standard	DIN 933 M10x40x1.5	
8.7	12	Seal housing stud M14		Standard	UNI 5910 Mx14x35x1.5	
8.8	12	Seal housing nut M14		Standard	DIN 934 M14x1.5	
8.9	12	Seal housing washer		Standard	DIN 125-1 A A 15	

PROJECT	CREATED BY	APPROVED BY	DATE	VERSION
Axial flow turbine 25kW	J. Rosciano	A. Morillo	10/08/2021	1.2
PART NAME	FILE NAME			POS
Parts list	pac_aft_axial-flow-turbine.csv			B2
DEVELOPED BY	REDESIGNED BY	DOC. TYPE	MATERIAL	QUANTITY
		Parts list		
Practical Action, Perú	OHO e.V.	LICENCE	SCALE	SHEET
		CC-BY-SA 4.0		5 /101

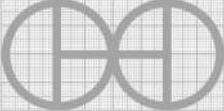
Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
9.0	1	Bearing support assembly	Bearing support assembly.iam			47-48
9.1	1	Bearing support	Bearing support.ipt	Production	DIN C45	49
9.2	1	Bearing support 1	Bearing support 1.ipt	Production	DIN C45	50
9.3	1	Bearing support 2	Bearing support 2.ipt	Production	DIN C45	51
9.4	4	Bearing support stud		Standard	UNI 5910 Mx14x30x1.5	
9.5	4	Bearing support nut		Standard	DIN 555 M14	
9.6	4	Bearing support washer		Standard	DIN 125-1 A A 15	
10.0	1	Generator base assembly	Generator base assembly.iam			52-53
10.1	1	Generator base	Generator base.ipt	Production	Thk 13 ASTM A36	54
10.2	2	Generator base 747	Generator base 747.ipt	Production	160x6x7 ASTM A36	55
10.3	2	Generator base 720	Generator base 720.ipt	Production	160x6x7 ASTM A36	56
10.4	1	Generator base 700	Generator base 700.ipt	Production	160x6x7 ASTM A36	57
11.0	1	Frame assembly	Frame assembly.iam			58-59
11.1	1	Frame 150	Frame 150.ipt	Production	Thk 6 ASTM A36	60
11.2	1	Frame 200	Frame 200.ipt	Production	Thk 6 ASTM A36	61
11.3	1	Frame 340	Frame 340.ipt	Production	Thk 6 ASTM A36	62
11.4	1	Cantilever	Cantilever.ipt	Production	Thk 6 ASTM A36	63
11.5	1	Cantilever base	Cantilever base.ipt	Production	Thk 6 ASTM A36	64
11.6	6	Generator base bolt		Standard	DIN 933 M20x35	
11.7	6	Generator base nut		Standard	DIN 555 M20	
11.8	12	Generator base washer		Standard	DIN 433 A 21	
12.0	1	Spiral casing	Spiral casing.iam	Production		65-66
12.1	1	Segment 1-1	Segment 1-1.ipt	Production	Thk 3.175 ASTM A569	67
12.2	1	Segment 1-2	Segment 1-2.ipt	Production	Thk 3.175 ASTM A569	68
12.3	1	Segment 2-3	Segment 2-3.ipt	Production	Thk 3.175 ASTM A569	69
12.4	1	Segment 3-4	Segment 3-4.ipt	Production	Thk 3.175 ASTM A569	70
12.5	1	Segment 4-5	Segment 4-5.ipt	Production	Thk 3.175 ASTM A569	71
12.6	1	Segment 5-6	Segment 5-6.ipt	Production	Thk 3.175 ASTM A569	72
12.7	1	Segment 6-7	Segment 6-7.ipt	Production	Thk 3.175 ASTM A569	73
12.8	1	Segment 7-8	Segment 7-8.ipt	Production	Thk 3.175 ASTM A569	74
12.9	1	Segment 8-9	Segment 8-9.ipt	Production	Thk 3.175 ASTM A569	75

PROJECT		CREATED BY		APPROVED BY		DATE		VERSION	
Axial flow turbine 25kW		J. Rosciano		A. Morillo		10/08/2021		1.2	
PART NAME		FILE NAME						POS	
Parts list		pac_aft_axial-flow-turbine.csv						B3	
DEVELOPED BY		REDESIGNED BY		DOC. TYPE		MATERIAL		QUANTITY	
				Parts list					
Practical Action, Perú		OHO e.V.		LICENCE		SCALE		SHEET	
				CC-BY-SA 4.0				6 /101	

Parts list

POS	QTY	PART NAME	FILE NAME	PART TYPE	SPECIFICATIONS	SHEET
12.10	1	Segment 9-10	Segment 9-10.ipt	Production	Thk 3.175 ASTM A569	76
12.11	1	Segment 10-11	Segment 10-11.ipt	Production	Thk 3.175 ASTM A569	77
12.12	1	Segment 11-12	Segment 11-12.ipt	Production	Thk 3.175 ASTM A569	78
12.13	1	Segment 12-13	Segment 12-13.ipt	Production	Thk 3.175 ASTM A569	79
12.14	1	Segment 13-14	Segment 13-14.ipt	Production	Thk 3.175 ASTM A569	80
12.15	1	Segment 14-15	Segment 14-15.ipt	Production	Thk 3.175 ASTM A569	81
12.16	1	Segment 15-16	Segment 15-16.ipt	Production	Thk 3.175 ASTM A569	82
12.17	1	Segment 16-17	Segment 16-17.ipt	Production	Thk 3.175 ASTM A569	83
12.18	1	Segment 17-18	Segment 17-18.ipt	Production	Thk 3.175 ASTM A569	84
12.19	1	Segment 18-19	Segment 18-19.ipt	Production	Thk 3.175 ASTM A569	85
12.20	1	Segment 19-20	Segment 19-20.ipt	Production	Thk 3.175 ASTM A569	86
12.21	1	Segment 20-21	Segment 20-21.ipt	Production	Thk 3.175 ASTM A569	87
12.22	1	Segment 21-22	Segment 21-22.ipt	Production	Thk 3.175 ASTM A569	88
12.23	1	Segment 22-23	Segment 22-23.ipt	Production	Thk 3.175 ASTM A569	89
13.0		Diffuser tube	Diffuser tube.iam	Production		90-91
13.1	1	Segment diffuser 0-0	Segment diffuser 0-0.ipt	Production	Thk 3.175 ASTM A569	92
13.2	1	Segment diffuser 0-1	Segment diffuser 0-1.ipt	Production	Thk 3.175 ASTM A569	93
13.3	1	Segment diffuser 1-2	Segment diffuser 1-2.ipt	Production	Thk 3.175 ASTM A569	94
13.4	1	Segment diffuser 2-3	Segment diffuser 2-3.ipt	Production	Thk 3.175 ASTM A569	95
13.5	1	Segment diffuser 3-4	Segment diffuser 3-4.ipt	Production	Thk 3.175 ASTM A569	96
13.6	1	Segment diffuser 4-5	Segment diffuser 4-5.ipt	Production	Thk 3.175 ASTM A569	97
13.7	1	Segment diffuser 5-6	Segment diffuser 5-6.ipt	Production	Thk 3.175 ASTM A569	98
13.8	1	Segment diffuser 6-7	Segment diffuser 6-7.ipt	Production	Thk 3.175 ASTM A569	99
13.9	1	Segment diffuser 7-8	Segment diffuser 7-8.ipt	Production	Thk 3.175 ASTM A569	100
13.10	1	Segment diffuser 8-9	Segment diffuser 8-9.ipt	Production	Thk 3.175 ASTM A569	101
14.0	1	Manometer		Buy	Manometer type Bourdon	
15.0	1	Dynamo		Buy	Dynamo Matari 25kW	

PROJECT		CREATED BY		APPROVED BY		DATE		VERSION	
Axial flow turbine 25kW		J. Rosciano		A. Morillo		10/08/2021		1.2	
PART NAME		FILE NAME						POS	
Parts list		pac_aft_axial-flow-turbine.csv							
DEVELOPED BY		REDESIGNED BY		DOC. TYPE		MATERIAL		QUANTITY	
				Parts list					
Practical Action, Perú		OHO e.V.		LICENCE		SCALE		SHEET	
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