

LAMPIRAN

Tabel L.1 Jadwal Penelitian

No,	Urutan Penelitian	Bulan ke-					
		I	II	III	IV	V	VI
1.	Tinjauan pustaka						
2.	Seminar proposal tugas akhir						
3.	Persiapan alat dan bahan turbin angin Savonius dua sudu dengan <i>dimple</i>						
4.	Pembuatan alat penelitian turbin angin Savonius dua sudu dengan <i>dimple</i> variasi diameter <i>dimple</i>						
5.	Pengambilan data						
6.	Pengolahan data dan analisa data						
7.	Seminar hasil						
8.	Ujian tugas akhir						

Tabel L.2 Sifat-fisik zat

PROPERTY TABLES AND CHARTS							
TABLE A-9							
Properties of air at 1 atm pressure							
Temp. $T, ^\circ\text{C}$	Density $\rho, \text{kg/m}^3$	Specific Heat c_p $\text{J/kg}\cdot\text{K}$	Thermal Conductivity $k, \text{W/m}\cdot\text{K}$	Thermal Diffusivity $\alpha, \text{m}^2/\text{s}$	Dynamic Viscosity $\mu, \text{kg/m}\cdot\text{s}$	Kinematic Viscosity $\nu, \text{m}^2/\text{s}$	Prandtl Number Pr
-150	2.866	983	0.01171	4.158×10^{-4}	8.636×10^{-6}	3.013×10^{-6}	0.7246
-100	2.038	906	0.01562	8.036×10^{-4}	1.189×10^{-5}	5.837×10^{-6}	0.7263
-50	1.582	999	0.01979	1.252×10^{-3}	1.474×10^{-5}	9.319×10^{-6}	0.7440
-40	1.514	1002	0.02057	1.356×10^{-3}	1.527×10^{-5}	1.008×10^{-5}	0.7436
-30	1.461	1004	0.02134	1.465×10^{-3}	1.579×10^{-5}	1.087×10^{-5}	0.7425
-20	1.394	1006	0.02211	1.578×10^{-3}	1.630×10^{-5}	1.169×10^{-5}	0.7408
-10	1.341	1006	0.02288	1.696×10^{-3}	1.680×10^{-5}	1.252×10^{-5}	0.7387
0	1.292	1006	0.02364	1.818×10^{-3}	1.729×10^{-5}	1.338×10^{-5}	0.7362
5	1.269	1006	0.02401	1.880×10^{-3}	1.754×10^{-5}	1.382×10^{-5}	0.7350
10	1.246	1006	0.02439	1.944×10^{-3}	1.778×10^{-5}	1.426×10^{-5}	0.7336
15	1.226	1007	0.02476	2.009×10^{-3}	1.802×10^{-5}	1.470×10^{-5}	0.7323
20	1.204	1007	0.02514	2.074×10^{-3}	1.825×10^{-5}	1.516×10^{-5}	0.7309
25	1.184	1007	0.02551	2.141×10^{-3}	1.849×10^{-5}	1.562×10^{-5}	0.7296
30	1.164	1007	0.02588	2.208×10^{-3}	1.872×10^{-5}	1.608×10^{-5}	0.7282
35	1.145	1007	0.02625	2.277×10^{-3}	1.895×10^{-5}	1.655×10^{-5}	0.7268
40	1.127	1007	0.02662	2.346×10^{-3}	1.918×10^{-5}	1.702×10^{-5}	0.7255
45	1.109	1007	0.02699	2.416×10^{-3}	1.941×10^{-5}	1.750×10^{-5}	0.7241
50	1.092	1007	0.02735	2.487×10^{-3}	1.963×10^{-5}	1.798×10^{-5}	0.7228
60	1.059	1007	0.02808	2.632×10^{-3}	2.008×10^{-5}	1.896×10^{-5}	0.7202
70	1.028	1007	0.02881	2.780×10^{-3}	2.052×10^{-5}	1.995×10^{-5}	0.7177
80	0.9994	1008	0.02953	2.931×10^{-3}	2.096×10^{-5}	2.097×10^{-5}	0.7154
90	0.9718	1008	0.03024	3.086×10^{-3}	2.139×10^{-5}	2.201×10^{-5}	0.7132
100	0.9458	1009	0.03095	3.243×10^{-3}	2.181×10^{-5}	2.306×10^{-5}	0.7111
120	0.8977	1011	0.03235	3.565×10^{-3}	2.264×10^{-5}	2.522×10^{-5}	0.7073
140	0.8542	1013	0.03374	3.898×10^{-3}	2.345×10^{-5}	2.745×10^{-5}	0.7041
160	0.8148	1016	0.03511	4.241×10^{-3}	2.420×10^{-5}	2.975×10^{-5}	0.7014
180	0.7788	1019	0.03646	4.593×10^{-3}	2.504×10^{-5}	3.212×10^{-5}	0.6992
200	0.7459	1023	0.03779	4.954×10^{-3}	2.577×10^{-5}	3.455×10^{-5}	0.6974
250	0.6746	1039	0.04104	5.890×10^{-3}	2.760×10^{-5}	4.091×10^{-5}	0.6946
300	0.6158	1044	0.04418	6.871×10^{-3}	2.934×10^{-5}	4.765×10^{-5}	0.6935
350	0.5664	1056	0.04721	7.892×10^{-3}	3.101×10^{-5}	5.475×10^{-5}	0.6937
400	0.5243	1069	0.05015	8.951×10^{-3}	3.261×10^{-5}	6.219×10^{-5}	0.6948
450	0.4880	1081	0.05298	1.004×10^{-2}	3.415×10^{-5}	6.997×10^{-5}	0.6965
500	0.4565	1093	0.05572	1.117×10^{-2}	3.563×10^{-5}	7.806×10^{-5}	0.6986
600	0.4042	1115	0.06093	1.352×10^{-2}	3.846×10^{-5}	9.515×10^{-5}	0.7037
700	0.3627	1135	0.06581	1.598×10^{-2}	4.111×10^{-5}	1.133×10^{-4}	0.7092
800	0.3289	1153	0.07037	1.855×10^{-2}	4.362×10^{-5}	1.326×10^{-4}	0.7149
900	0.3008	1169	0.07465	2.122×10^{-2}	4.600×10^{-5}	1.529×10^{-4}	0.7206
1000	0.2772	1184	0.07868	2.398×10^{-2}	4.826×10^{-5}	1.741×10^{-4}	0.7260
1500	0.1990	1234	0.09599	3.938×10^{-2}	6.817×10^{-5}	2.922×10^{-4}	0.7476
2000	0.1553	1264	0.11113	5.664×10^{-2}	6.630×10^{-5}	4.270×10^{-4}	0.7539

Note: For ideal gases, the properties c_p , k , μ , and Pr are independent of pressure. The properties ρ , ν , and α at a pressure P (in atm) other than 1 atm are determined by multiplying the values of ρ at the given temperature by P and by dividing ν and α by P .

Source: Data generated from the EES software developed by S. A. Klein and F. L. Alvarado. Original sources: Keenan, Chao, Keyes, Gas Tables, Wiley, 1983; and Thermophysical Properties of Matter, Vol. 3: Thermal Conductivity, Y. S. Touloukian, P. E. Liley, S. C. Saxena, Vol. 11: Viscosity, Y. S. Touloukian, S. C. Saxena, and P. Hestermann, Plenum, NY, 1970, ISBN 0-306067020-8.

Tabel L.3 Data kecepatan angin rata-rata dan temperatur pada data *logger*

NO	Kecepatan Angin (m/s)	Temperatur (°C)	Waktu	Tanggal
1	10,410	24	13:11:22	09-08-2025
2	10,424	24	13:11:23	09-08-2025
3	10,289	24	13:11:24	09-08-2025
4	10,279	24	13:11:25	09-08-2025
5	10,277	24	13:11:26	09-08-2025
6	10,441	24	13:11:27	09-08-2025
7	10,420	24	13:11:28	09-08-2025
8	10,398	24	13:11:29	09-08-2025
9	10,506	24	13:11:30	09-08-2025
10	10,616	24	13:11:31	09-08-2025
11	10,719	24	13:11:32	09-08-2025
12	10,721	24	13:11:33	09-08-2025
13	10,557	24	13:11:34	09-08-2025
14	10,489	24	13:11:35	09-08-2025
15	10,583	24	13:11:36	09-08-2025
16	10,626	24	13:11:37	09-08-2025
17	10,582	24	13:11:38	09-08-2025
18	10,529	24	13:11:39	09-08-2025
19	10,484	24	13:11:40	09-08-2025
20	10,514	24	13:11:41	09-08-2025
21	10,537	24	13:11:42	09-08-2025
22	10,587	24	13:11:43	09-08-2025
23	10,551	24	13:11:44	09-08-2025
24	10,410	24	13:11:45	09-08-2025
25	10,341	24	13:11:46	09-08-2025
26	10,460	24	13:11:47	09-08-2025
27	10,599	24	13:11:48	09-08-2025
28	10,445	24	13:11:49	09-08-2025
29	10,326	24	13:11:50	09-08-2025
30	10,220	24	13:11:51	09-08-2025
	10,480	24		

Tabel L.4 Data pengukuran beban dan putaran turbin angin Savonius dua sudu tanpa *dimple*

Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg		2.5 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	432.70	2025-07-29 15:19:12.459	400.80	2025-07-29 15:20:45.284	359.80	2025-07-29 15:22:19.909	331.10	2025-07-29 15:23:39.876	283.10	2025-07-29 15:25:34.258	252.90	2025-07-29 15:27:30.633
2	432.70	2025-07-29 15:19:12.965	400.80	2025-07-29 15:20:45.773	359.80	2025-07-29 15:22:20.415	331.10	2025-07-29 15:23:40.365	283.20	2025-07-29 15:25:34.763	252.90	2025-07-29 15:27:31.137
3	430.30	2025-07-29 15:19:13.469	401.00	2025-07-29 15:20:46.293	361.30	2025-07-29 15:22:20.919	326.50	2025-07-29 15:23:40.885	283.20	2025-07-29 15:25:35.269	250.60	2025-07-29 15:27:31.641
4	430.30	2025-07-29 15:19:13.971	401.00	2025-07-29 15:20:46.780	361.30	2025-07-29 15:22:21.425	326.50	2025-07-29 15:23:41.389	282.00	2025-07-29 15:25:35.771	250.60	2025-07-29 15:27:32.144
5	434.10	2025-07-29 15:19:14.460	401.00	2025-07-29 15:20:47.300	359.30	2025-07-29 15:22:21.910	325.90	2025-07-29 15:23:41.877	282.00	2025-07-29 15:25:36.256	250.60	2025-07-29 15:27:32.632
6	434.10	2025-07-29 15:19:14.964	401.90	2025-07-29 15:20:47.788	359.30	2025-07-29 15:22:22.414	325.90	2025-07-29 15:23:42.361	281.90	2025-07-29 15:25:36.762	245.70	2025-07-29 15:27:33.136
7	435.70	2025-07-29 15:19:15.469	401.90	2025-07-29 15:20:48.275	350.80	2025-07-29 15:22:22.920	323.70	2025-07-29 15:23:42.869	281.90	2025-07-29 15:25:37.266	245.70	2025-07-29 15:27:33.639
8	435.70	2025-07-29 15:19:15.971	406.70	2025-07-29 15:20:48.780	350.80	2025-07-29 15:22:23.421	323.70	2025-07-29 15:23:43.372	281.70	2025-07-29 15:25:37.770	243.20	2025-07-29 15:27:34.142
9	435.70	2025-07-29 15:19:16.459	406.70	2025-07-29 15:20:49.283	350.80	2025-07-29 15:22:23.911	324.50	2025-07-29 15:23:43.874	281.70	2025-07-29 15:25:38.255	243.20	2025-07-29 15:27:34.647
10	434.50	2025-07-29 15:19:16.963	406.30	2025-07-29 15:20:49.817	349.40	2025-07-29 15:22:24.428	324.50	2025-07-29 15:23:44.379	281.70	2025-07-29 15:25:38.763	233.50	2025-07-29 15:27:35.134
11	434.50	2025-07-29 15:19:17.465	406.30	2025-07-29 15:20:50.274	349.40	2025-07-29 15:22:24.915	324.20	2025-07-29 15:23:44.864	279.00	2025-07-29 15:25:39.264	233.50	2025-07-29 15:27:35.637
12	433.40	2025-07-29 15:19:17.971	404.80	2025-07-29 15:20:50.780	355.30	2025-07-29 15:22:25.421	324.20	2025-07-29 15:23:45.370	279.00	2025-07-29 15:25:39.782	230.60	2025-07-29 15:27:36.143
13	433.40	2025-07-29 15:19:18.471	404.80	2025-07-29 15:20:51.281	355.30	2025-07-29 15:22:25.906	321.60	2025-07-29 15:23:45.871	278.10	2025-07-29 15:25:40.289	230.60	2025-07-29 15:27:36.632
14	436.50	2025-07-29 15:19:18.963	403.70	2025-07-29 15:20:51.787	358.30	2025-07-29 15:22:26.411	321.60	2025-07-29 15:23:46.375	278.10	2025-07-29 15:25:40.758	230.60	2025-07-29 15:27:37.135
15	436.50	2025-07-29 15:19:19.477	403.70	2025-07-29 15:20:52.274	358.30	2025-07-29 15:22:26.929	322.00	2025-07-29 15:23:46.866	279.80	2025-07-29 15:25:41.266	240.30	2025-07-29 15:27:37.639
16	441.60	2025-07-29 15:19:19.970	403.70	2025-07-29 15:20:52.775	361.90	2025-07-29 15:22:27.421	322.00	2025-07-29 15:23:47.368	279.80	2025-07-29 15:25:41.768	240.30	2025-07-29 15:27:38.141
17	441.60	2025-07-29 15:19:20.472	402.60	2025-07-29 15:20:53.280	361.90	2025-07-29 15:22:27.922	323.00	2025-07-29 15:23:47.873	279.80	2025-07-29 15:25:42.270	242.30	2025-07-29 15:27:38.647
18	446.50	2025-07-29 15:19:20.960	402.60	2025-07-29 15:20:53.784	363.30	2025-07-29 15:22:28.411	323.00	2025-07-29 15:23:48.377	279.80	2025-07-29 15:25:42.759	242.30	2025-07-29 15:27:39.135
19	446.50	2025-07-29 15:19:21.465	403.40	2025-07-29 15:20:54.274	363.30	2025-07-29 15:22:28.913	323.00	2025-07-29 15:23:48.863	279.80	2025-07-29 15:25:43.263	242.30	2025-07-29 15:27:39.636
20	451.60	2025-07-29 15:19:21.969	403.40	2025-07-29 15:20:54.778	363.30	2025-07-29 15:22:29.419	323.80	2025-07-29 15:23:49.367	282.20	2025-07-29 15:25:43.767	242.30	2025-07-29 15:27:40.142
21	451.60	2025-07-29 15:19:22.472	405.60	2025-07-29 15:20:55.279	366.80	2025-07-29 15:22:29.919	323.80	2025-07-29 15:23:49.870	282.20	2025-07-29 15:25:44.268	246.10	2025-07-29 15:27:40.646
22	451.60	2025-07-29 15:19:22.960	405.60	2025-07-29 15:20:55.785	366.80	2025-07-29 15:22:30.411	323.50	2025-07-29 15:23:50.376	289.00	2025-07-29 15:25:44.757	246.10	2025-07-29 15:27:41.131
23	452.50	2025-07-29 15:19:23.460	410.50	2025-07-29 15:20:56.289	372.00	2025-07-29 15:22:30.912	323.50	2025-07-29 15:23:50.877	289.00	2025-07-29 15:25:45.261	249.80	2025-07-29 15:27:41.636
24	452.50	2025-07-29 15:19:23.967	410.50	2025-07-29 15:20:56.776	372.00	2025-07-29 15:22:31.418	323.20	2025-07-29 15:23:51.367	290.20	2025-07-29 15:25:45.766	249.80	2025-07-29 15:27:42.141
25	452.70	2025-07-29 15:19:24.468	410.50	2025-07-29 15:20:57.278	370.00	2025-07-29 15:22:31.922	323.20	2025-07-29 15:23:51.870	290.20	2025-07-29 15:25:46.266	249.40	2025-07-29 15:27:42.640
26	452.70	2025-07-29 15:19:24.976	414.10	2025-07-29 15:20:57.782	370.00	2025-07-29 15:22:32.409	324.10	2025-07-29 15:23:52.375	286.90	2025-07-29 15:25:46.774	249.40	2025-07-29 15:27:43.131
27	452.00	2025-07-29 15:19:25.461	414.10	2025-07-29 15:20:58.287	370.50	2025-07-29 15:22:32.911	324.10	2025-07-29 15:23:52.876	286.90	2025-07-29 15:25:47.259	249.40	2025-07-29 15:27:43.632
28	452.00	2025-07-29 15:19:25.966	417.50	2025-07-29 15:20:58.772	370.50	2025-07-29 15:22:33.417	325.20	2025-07-29 15:23:53.363	282.30	2025-07-29 15:25:47.763	243.70	2025-07-29 15:27:44.140
29	449.00	2025-07-29 15:19:26.468	417.50	2025-07-29 15:20:59.277	370.30	2025-07-29 15:22:33.921	325.20	2025-07-29 15:23:53.866	282.30	2025-07-29 15:25:48.265	243.70	2025-07-29 15:27:44.640
30	449.00	2025-07-29 15:19:26.975	421.60	2025-07-29 15:20:59.783	370.30	2025-07-29 15:22:34.407	326.60	2025-07-29 15:23:54.373	280.70	2025-07-29 15:25:48.769	242.60	2025-07-29 15:27:45.131
	441.78		406.49		361.74		324.47		282.58		243.80	

3 kg		3,5 kg		4 kg		4,5 kg		5 kg		5,5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
206.20	2025-07-29 15:28:45.331	160.40	2025-07-29 15:30:12.450	137.20	2025-07-29 15:31:43.427	100.92	2025-07-29 15:33:23.457	51.95	2025-07-29 15:36:21.173	0	2025-07-29 14:36:25.220
202.20	2025-07-29 15:28:45.832	160.40	2025-07-29 15:30:12.954	137.20	2025-07-29 15:31:43.962	97.59	2025-07-29 15:33:23.960	51.03	2025-07-29 15:36:21.659	0	2025-07-29 14:36:25.728
202.20	2025-07-29 15:28:46.354	163.00	2025-07-29 15:30:13.441	137.20	2025-07-29 15:31:44.417	97.59	2025-07-29 15:33:24.463	51.03	2025-07-29 15:36:22.165	0	2025-07-29 14:36:26.217
202.20	2025-07-29 15:28:46.827	163.00	2025-07-29 15:30:13.945	134.90	2025-07-29 15:31:44.922	97.59	2025-07-29 15:33:24.954	53.23	2025-07-29 15:36:22.667	0	2025-07-29 14:36:26.719
196.60	2025-07-29 15:28:47.329	160.60	2025-07-29 15:30:14.448	134.90	2025-07-29 15:31:45.426	97.59	2025-07-29 15:33:25.472	53.23	2025-07-29 15:36:23.171	0	2025-07-29 14:36:27.225
196.60	2025-07-29 15:28:47.833	160.60	2025-07-29 15:30:14.953	131.38	2025-07-29 15:31:45.931	94.68	2025-07-29 15:33:25.960	53.23	2025-07-29 15:36:23.673	0	2025-07-29 14:36:27.725
196.10	2025-07-29 15:28:48.337	160.60	2025-07-29 15:30:15.442	131.38	2025-07-29 15:31:46.416	94.68	2025-07-29 15:33:26.465	50.67	2025-07-29 15:36:24.162	0	2025-07-29 14:36:28.213
196.10	2025-07-29 15:28:48.840	162.00	2025-07-29 15:30:15.943	131.38	2025-07-29 15:31:46.922	94.68	2025-07-29 15:33:26.951	50.67	2025-07-29 15:36:24.667	0	2025-07-29 14:36:28.733
199.00	2025-07-29 15:28:49.326	162.00	2025-07-29 15:30:16.448	126.60	2025-07-29 15:31:47.426	94.68	2025-07-29 15:33:27.455	50.67	2025-07-29 15:36:25.170	0	2025-07-29 14:36:29.219
199.00	2025-07-29 15:28:49.831	166.00	2025-07-29 15:30:16.951	126.60	2025-07-29 15:31:47.931	95.35	2025-07-29 15:33:27.959	48.19	2025-07-29 15:36:25.676	0	2025-07-29 14:36:29.741
200.20	2025-07-29 15:28:50.334	166.00	2025-07-29 15:30:17.454	126.60	2025-07-29 15:31:48.415	95.35	2025-07-29 15:33:28.465	48.19	2025-07-29 15:36:26.161	0	2025-07-29 14:36:30.212
200.20	2025-07-29 15:28:50.838	166.00	2025-07-29 15:30:17.944	120.45	2025-07-29 15:31:48.921	95.35	2025-07-29 15:33:28.950	48.19	2025-07-29 15:36:26.667	0	2025-07-29 14:36:30.715
199.90	2025-07-29 15:28:51.328	169.20	2025-07-29 15:30:18.447	120.45	2025-07-29 15:31:49.423	95.23	2025-07-29 15:33:29.453	50.36	2025-07-29 15:36:27.172	0	2025-07-29 14:36:31.219
199.90	2025-07-29 15:28:51.829	169.20	2025-07-29 15:30:18.953	122.97	2025-07-29 15:31:49.929	95.23	2025-07-29 15:33:29.959	50.36	2025-07-29 15:36:27.672	0	2025-07-29 14:36:31.723
202.20	2025-07-29 15:28:52.334	167.10	2025-07-29 15:30:19.454	122.97	2025-07-29 15:31:50.417	95.23	2025-07-29 15:33:30.477	50.36	2025-07-29 15:36:28.178	0	2025-07-29 14:36:32.228
202.20	2025-07-29 15:28:52.837	167.10	2025-07-29 15:30:19.943	122.97	2025-07-29 15:31:50.921	95.23	2025-07-29 15:33:30.948	48.68	2025-07-29 15:36:28.664	0	2025-07-29 14:36:32.713
203.80	2025-07-29 15:28:53.324	163.70	2025-07-29 15:30:20.463	127.62	2025-07-29 15:31:51.422	93.03	2025-07-29 15:33:31.455	48.68	2025-07-29 15:36:29.184	0	2025-07-29 14:36:33.218
203.80	2025-07-29 15:28:53.828	163.70	2025-07-29 15:30:20.949	127.62	2025-07-29 15:31:51.928	93.03	2025-07-29 15:33:31.956	48.68	2025-07-29 15:36:29.672	0	2025-07-29 14:36:33.723
203.80	2025-07-29 15:28:54.331	163.90	2025-07-29 15:30:21.452	128.52	2025-07-29 15:31:52.432	93.03	2025-07-29 15:33:32.460	50.86	2025-07-29 15:36:30.161	0	2025-07-29 14:36:34.225
203.40	2025-07-29 15:28:54.851	163.90	2025-07-29 15:30:21.940	128.52	2025-07-29 15:31:52.918	93.03	2025-07-29 15:33:32.964	50.86	2025-07-29 15:36:30.664	0	2025-07-29 14:36:34.713
203.40	2025-07-29 15:28:55.339	163.90	2025-07-29 15:30:22.443	128.52	2025-07-29 15:31:53.423	92.34	2025-07-29 15:33:33.451	56.34	2025-07-29 15:36:31.167	0	2025-07-29 14:36:35.217
202.80	2025-07-29 15:28:55.827	166.40	2025-07-29 15:30:22.948	128.72	2025-07-29 15:31:53.927	92.34	2025-07-29 15:33:33.955	56.34	2025-07-29 15:36:31.672	0	2025-07-29 14:36:35.721
202.80	2025-07-29 15:28:56.333	166.40	2025-07-29 15:30:23.453	128.72	2025-07-29 15:31:54.431	92.34	2025-07-29 15:33:34.459	56.34	2025-07-29 15:36:32.174	0	2025-07-29 14:36:36.224
203.80	2025-07-29 15:28:56.834	166.40	2025-07-29 15:30:23.958	123.76	2025-07-29 15:31:54.919	92.34	2025-07-29 15:33:34.963	57.00	2025-07-29 15:36:32.663	0	2025-07-29 14:36:36.713
203.80	2025-07-29 15:28:57.338	167.90	2025-07-29 15:30:24.442	123.76	2025-07-29 15:31:55.421	93.28	2025-07-29 15:33:35.452	57.00	2025-07-29 15:36:33.165	0	2025-07-29 14:36:37.217
202.20	2025-07-29 15:28:57.826	167.90	2025-07-29 15:30:24.947	123.76	2025-07-29 15:31:55.926	93.28	2025-07-29 15:33:35.952	56.17	2025-07-29 15:36:33.670	0	2025-07-29 14:36:37.735
202.20	2025-07-29 15:28:58.330	165.40	2025-07-29 15:30:25.451	121.04	2025-07-29 15:31:56.426	93.28	2025-07-29 15:33:36.460	56.17	2025-07-29 15:36:34.175	0	2025-07-29 14:36:38.226
195.20	2025-07-29 15:28:58.836	165.40	2025-07-29 15:30:25.956	121.04	2025-07-29 15:31:56.913	94.92	2025-07-29 15:33:36.962	56.17	2025-07-29 15:36:34.660	0	2025-07-29 14:36:38.726
195.20	2025-07-29 15:28:59.338	165.40	2025-07-29 15:30:26.442	121.04	2025-07-29 15:31:57.417	94.92	2025-07-29 15:33:37.447	52.58	2025-07-29 15:36:35.164	0	2025-07-29 14:36:39.230
195.20	2025-07-29 15:28:59.827	165.70	2025-07-29 15:30:26.947	120.86	2025-07-29 15:31:57.920	94.92	2025-07-29 15:33:37.955	52.58	2025-07-29 15:36:35.666	0	2025-07-29 14:36:39.734
200.74		164.64		127.29		94.77		52.19		0	

Tabel L.5 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 3 mm

Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg		2.5 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	443.00	2025-07-28 13:43:47.311	403.50	2025-07-28 13:46:14.082	367.10	2025-07-28 13:47:43.505	313.90	2025-07-28 13:49:01.263	305.70	2025-07-28 13:54:08.244	248.50	2025-07-28 13:55:38.207
2	444.70	2025-07-28 13:43:47.763	409.20	2025-07-28 13:46:14.568	372.50	2025-07-28 13:47:44.042	313.90	2025-07-28 13:49:01.754	295.40	2025-07-28 13:54:08.749	248.50	2025-07-28 13:55:38.710
3	444.70	2025-07-28 13:43:48.270	409.20	2025-07-28 13:46:15.072	372.50	2025-07-28 13:47:44.516	313.90	2025-07-28 13:49:02.243	295.40	2025-07-28 13:54:09.269	248.50	2025-07-28 13:55:39.197
4	448.90	2025-07-28 13:43:48.756	409.20	2025-07-28 13:46:15.575	372.50	2025-07-28 13:47:45.005	319.00	2025-07-28 13:49:02.748	287.80	2025-07-28 13:54:09.754	251.90	2025-07-28 13:55:39.704
5	448.90	2025-07-28 13:43:49.259	410.00	2025-07-28 13:46:16.079	373.70	2025-07-28 13:47:45.507	319.00	2025-07-28 13:49:03.251	287.80	2025-07-28 13:54:10.243	251.90	2025-07-28 13:55:40.204
6	446.90	2025-07-28 13:43:49.763	410.00	2025-07-28 13:46:16.566	373.70	2025-07-28 13:47:46.012	323.80	2025-07-28 13:49:03.754	287.30	2025-07-28 13:54:10.747	257.80	2025-07-28 13:55:40.711
7	446.90	2025-07-28 13:43:50.266	412.90	2025-07-28 13:46:17.071	369.30	2025-07-28 13:47:46.516	323.80	2025-07-28 13:49:04.243	287.30	2025-07-28 13:54:11.251	257.80	2025-07-28 13:55:41.215
8	442.20	2025-07-28 13:43:50.772	412.90	2025-07-28 13:46:17.573	369.30	2025-07-28 13:47:47.018	328.60	2025-07-28 13:49:04.746	293.70	2025-07-28 13:54:11.755	264.80	2025-07-28 13:55:41.699
9	442.20	2025-07-28 13:43:51.258	415.80	2025-07-28 13:46:18.077	362.30	2025-07-28 13:47:47.524	328.60	2025-07-28 13:49:05.250	293.70	2025-07-28 13:54:12.244	264.80	2025-07-28 13:55:42.205
10	445.20	2025-07-28 13:43:51.763	415.80	2025-07-28 13:46:18.565	362.30	2025-07-28 13:47:48.007	334.80	2025-07-28 13:49:05.752	295.20	2025-07-28 13:54:12.746	268.30	2025-07-28 13:55:42.709
11	445.20	2025-07-28 13:43:52.265	415.10	2025-07-28 13:46:19.070	362.70	2025-07-28 13:47:48.511	334.80	2025-07-28 13:49:06.237	295.20	2025-07-28 13:54:13.251	268.30	2025-07-28 13:55:43.212
12	455.40	2025-07-28 13:43:52.770	415.10	2025-07-28 13:46:19.590	362.70	2025-07-28 13:47:49.019	336.10	2025-07-28 13:49:06.746	296.90	2025-07-28 13:54:13.768	263.80	2025-07-28 13:55:43.701
13	455.40	2025-07-28 13:43:53.257	416.80	2025-07-28 13:46:20.075	371.50	2025-07-28 13:47:49.504	336.10	2025-07-28 13:49:07.247	296.90	2025-07-28 13:54:14.257	263.80	2025-07-28 13:55:44.204
14	455.40	2025-07-28 13:43:53.763	416.80	2025-07-28 13:46:20.581	371.50	2025-07-28 13:47:50.010	336.10	2025-07-28 13:49:07.752	296.90	2025-07-28 13:54:14.745	263.80	2025-07-28 13:55:44.708
15	464.10	2025-07-28 13:43:54.264	418.90	2025-07-28 13:46:21.070	374.00	2025-07-28 13:47:50.513	335.20	2025-07-28 13:49:08.257	299.70	2025-07-28 13:54:15.264	259.80	2025-07-28 13:55:45.211
16	464.10	2025-07-28 13:43:54.770	418.90	2025-07-28 13:46:21.574	374.00	2025-07-28 13:47:51.015	335.20	2025-07-28 13:49:08.744	299.70	2025-07-28 13:54:15.768	259.80	2025-07-28 13:55:45.697
17	463.20	2025-07-28 13:43:55.255	419.30	2025-07-28 13:46:22.080	374.00	2025-07-28 13:47:51.502	338.20	2025-07-28 13:49:09.247	296.80	2025-07-28 13:54:16.258	258.60	2025-07-28 13:55:46.201
18	463.20	2025-07-28 13:43:55.762	419.30	2025-07-28 13:46:22.580	372.00	2025-07-28 13:47:52.009	338.20	2025-07-28 13:49:09.752	296.80	2025-07-28 13:54:16.746	258.60	2025-07-28 13:55:46.707
19	457.30	2025-07-28 13:43:56.266	419.60	2025-07-28 13:46:23.070	372.00	2025-07-28 13:47:52.512	342.40	2025-07-28 13:49:10.255	294.40	2025-07-28 13:54:17.247	255.80	2025-07-28 13:55:47.209
20	457.30	2025-07-28 13:43:56.770	419.60	2025-07-28 13:46:23.574	374.80	2025-07-28 13:47:53.014	342.40	2025-07-28 13:49:10.742	294.40	2025-07-28 13:54:17.753	255.80	2025-07-28 13:55:47.713
21	451.90	2025-07-28 13:43:57.257	417.50	2025-07-28 13:46:24.078	374.80	2025-07-28 13:47:53.517	345.30	2025-07-28 13:49:11.246	301.00	2025-07-28 13:54:18.257	249.90	2025-07-28 13:55:48.200
22	451.90	2025-07-28 13:43:57.760	417.50	2025-07-28 13:46:24.597	377.90	2025-07-28 13:47:54.008	345.30	2025-07-28 13:49:11.750	301.00	2025-07-28 13:54:18.744	249.90	2025-07-28 13:55:48.704
23	451.90	2025-07-28 13:43:58.263	417.40	2025-07-28 13:46:25.068	377.90	2025-07-28 13:47:54.509	345.20	2025-07-28 13:49:12.253	309.60	2025-07-28 13:54:19.247	249.90	2025-07-28 13:55:49.208
24	449.80	2025-07-28 13:43:58.765	417.40	2025-07-28 13:46:25.572	380.40	2025-07-28 13:47:55.011	345.20	2025-07-28 13:49:12.742	309.60	2025-07-28 13:54:19.749	244.70	2025-07-28 13:55:49.712
25	449.80	2025-07-28 13:43:59.270	418.50	2025-07-28 13:46:26.077	380.40	2025-07-28 13:47:55.551	343.50	2025-07-28 13:49:13.245	308.60	2025-07-28 13:54:20.287	244.70	2025-07-28 13:55:50.200
26	451.80	2025-07-28 13:43:59.759	418.50	2025-07-28 13:46:26.580	380.40	2025-07-28 13:47:56.004	343.50	2025-07-28 13:49:13.747	308.60	2025-07-28 13:54:20.759	247.20	2025-07-28 13:55:50.702
27	451.80	2025-07-28 13:44:00.263	418.70	2025-07-28 13:46:27.084	379.90	2025-07-28 13:47:56.510	341.60	2025-07-28 13:49:14.249	298.30	2025-07-28 13:54:21.245	247.20	2025-07-28 13:55:51.206
28	455.60	2025-07-28 13:44:00.767	418.70	2025-07-28 13:46:27.572	379.90	2025-07-28 13:47:57.014	341.60	2025-07-28 13:49:14.739	298.30	2025-07-28 13:54:21.749	249.10	2025-07-28 13:55:51.710
29	455.60	2025-07-28 13:44:01.267	419.60	2025-07-28 13:46:28.074	378.60	2025-07-28 13:47:57.515	341.80	2025-07-28 13:49:15.244	290.50	2025-07-28 13:54:22.252	249.10	2025-07-28 13:55:52.197
30	457.80	2025-07-28 13:44:01.774	419.60	2025-07-28 13:46:28.576	378.60	2025-07-28 13:47:58.005	341.80	2025-07-28 13:49:15.745	290.50	2025-07-28 13:54:22.758	249.10	2025-07-28 13:55:52.701
	452.07		415.71		373.11		334.29		297.10		255.06	

3 kg		3.5 kg		4 kg		4.5 kg		5 kg		5.5 kg		6 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
197.50	2025-07-28 13:57:03.176	126.30	2025-07-28 14:06:31.395	130.90	2025-07-28 14:01:46.133	101.20	2025-07-28 14:08:09.142	66.06	2025-07-28 14:13:17.204	53.17	2025-07-28 14:14:33.030	0	2025-07-29 09:35:34.474
197.50	2025-07-28 13:57:03.680	134.40	2025-07-28 14:06:31.897	130.90	2025-07-28 14:01:46.636	101.20	2025-07-28 14:08:09.646	66.06	2025-07-28 14:13:17.740	53.17	2025-07-28 14:14:33.531	0	2025-07-29 09:35:34.981
197.50	2025-07-28 13:57:04.203	134.40	2025-07-28 14:06:32.386	130.90	2025-07-28 14:01:47.124	101.20	2025-07-28 14:08:10.149	66.06	2025-07-28 14:13:18.195	53.17	2025-07-28 14:14:34.022	0	2025-07-29 09:35:35.485
194.50	2025-07-28 13:57:04.688	134.40	2025-07-28 14:06:32.889	133.80	2025-07-28 14:01:47.629	96.21	2025-07-28 14:08:10.652	70.92	2025-07-28 14:13:18.716	51.67	2025-07-28 14:14:34.524	0	2025-07-29 09:35:35.971
194.50	2025-07-28 13:57:05.176	201.50	2025-07-28 14:06:33.395	133.80	2025-07-28 14:01:48.135	96.21	2025-07-28 14:08:11.156	70.92	2025-07-28 14:13:19.185	51.67	2025-07-28 14:14:35.026	0	2025-07-29 09:35:36.475
196.70	2025-07-28 13:57:05.679	201.50	2025-07-28 14:06:33.895	132.60	2025-07-28 14:01:48.621	93.34	2025-07-28 14:08:11.673	70.92	2025-07-28 14:13:19.704	51.67	2025-07-28 14:14:35.531	0	2025-07-29 09:35:36.976
196.70	2025-07-28 13:57:06.201	193.00	2025-07-28 14:06:34.403	132.60	2025-07-28 14:01:49.125	93.34	2025-07-28 14:08:12.149	74.93	2025-07-28 14:13:20.193	51.67	2025-07-28 14:14:36.053	0	2025-07-29 09:35:37.466
205.70	2025-07-28 13:57:06.689	193.00	2025-07-28 14:06:34.888	132.70	2025-07-28 14:01:49.629	93.34	2025-07-28 14:08:12.649	74.93	2025-07-28 14:13:20.699	56.01	2025-07-28 14:14:36.525	0	2025-07-29 09:35:37.968
205.70	2025-07-28 13:57:07.175	190.00	2025-07-28 14:06:35.393	132.70	2025-07-28 14:01:50.132	92.27	2025-07-28 14:08:13.156	74.93	2025-07-28 14:13:21.183	56.01	2025-07-28 14:14:37.028	0	2025-07-29 09:35:38.472
214.80	2025-07-28 13:57:07.680	190.00	2025-07-28 14:06:35.897	132.70	2025-07-28 14:01:50.618	92.27	2025-07-28 14:08:13.642	78.68	2025-07-28 14:13:21.690	56.01	2025-07-28 14:14:37.531	0	2025-07-29 09:35:38.976
214.80	2025-07-28 13:57:08.184	190.00	2025-07-28 14:06:36.398	132.30	2025-07-28 14:01:51.123	92.30	2025-07-28 14:08:14.148	78.68	2025-07-28 14:13:22.192	56.01	2025-07-28 14:14:38.035	0	2025-07-29 09:35:39.463
216.80	2025-07-28 13:57:08.687	171.10	2025-07-28 14:06:36.888	132.30	2025-07-28 14:01:51.628	92.30	2025-07-28 14:08:14.647	78.68	2025-07-28 14:13:22.696	52.24	2025-07-28 14:14:38.522	0	2025-07-29 09:35:39.967
216.80	2025-07-28 13:57:09.170	171.10	2025-07-28 14:06:37.391	128.20	2025-07-28 14:01:52.129	92.30	2025-07-28 14:08:15.155	81.92	2025-07-28 14:13:23.185	52.24	2025-07-28 14:14:39.025	0	2025-07-29 09:35:40.471
216.80	2025-07-28 13:57:09.676	167.50	2025-07-28 14:06:37.893	128.20	2025-07-28 14:01:52.633	96.06	2025-07-28 14:08:15.639	81.92	2025-07-28 14:13:23.688	46.51	2025-07-28 14:14:39.530	0	2025-07-29 09:35:40.974
214.00	2025-07-28 13:57:10.183	167.50	2025-07-28 14:06:38.397	128.10	2025-07-28 14:01:53.121	96.06	2025-07-28 14:08:16.145	84.39	2025-07-28 14:13:24.190	46.51	2025-07-28 14:14:40.035	0	2025-07-29 09:35:41.479
214.00	2025-07-28 13:57:10.684	187.20	2025-07-28 14:06:38.903	128.10	2025-07-28 14:01:53.640	107.20	2025-07-28 14:08:16.647	84.39	2025-07-28 14:13:24.695	44.76	2025-07-28 14:14:40.522	0	2025-07-29 09:35:41.966
217.80	2025-07-28 13:57:11.187	187.20	2025-07-28 14:06:39.388	131.80	2025-07-28 14:01:54.160	107.20	2025-07-28 14:08:17.152	84.39	2025-07-28 14:13:25.200	44.76	2025-07-28 14:14:41.023	0	2025-07-29 09:35:42.470
217.80	2025-07-28 13:57:11.676	193.70	2025-07-28 14:06:39.892	131.80	2025-07-28 14:01:54.634	117.50	2025-07-28 14:08:17.639	82.67	2025-07-28 14:13:25.688	45.67	2025-07-28 14:14:41.529	0	2025-07-29 09:35:42.974
217.80	2025-07-28 13:57:12.180	193.70	2025-07-28 14:06:40.397	131.80	2025-07-28 14:01:55.121	117.50	2025-07-28 14:08:18.145	82.67	2025-07-28 14:13:26.189	45.67	2025-07-28 14:14:42.031	0	2025-07-29 09:35:43.478
223.20	2025-07-28 13:57:12.685	193.40	2025-07-28 14:06:40.882	140.10	2025-07-28 14:01:55.642	117.50	2025-07-28 14:08:18.649	82.67	2025-07-28 14:13:26.696	45.67	2025-07-28 14:14:42.520	0	2025-07-29 09:35:43.964
223.20	2025-07-28 13:57:13.187	193.40	2025-07-28 14:06:41.388	140.10	2025-07-28 14:01:56.128	122.30	2025-07-28 14:08:19.150	81.45	2025-07-28 14:13:27.199	38.04	2025-07-28 14:14:43.022	0	2025-07-29 09:35:44.468
223.50	2025-07-28 13:57:13.675	193.40	2025-07-28 14:06:41.892	150.80	2025-07-28 14:01:56.630	122.30	2025-07-28 14:08:19.655	81.45	2025-07-28 14:13:27.685	38.04	2025-07-28 14:14:43.528	0	2025-07-29 09:35:44.988
223.50	2025-07-28 13:57:14.177	182.20	2025-07-28 14:06:42.396	150.80	2025-07-28 14:01:57.120	122.30	2025-07-28 14:08:20.142	81.45	2025-07-28 14:13:28.187	29.70	2025-07-28 14:14:44.029	0	2025-07-29 09:35:45.476
223.50	2025-07-28 13:57:14.683	182.20	2025-07-28 14:06:42.899	150.80	2025-07-28 14:01:57.625	123.70	2025-07-28 14:08:20.645	82.27	2025-07-28 14:13:28.694	29.70	2025-07-28 14:14:44.536	0	2025-07-29 09:35:45.964
224.10	2025-07-28 13:57:15.189	174.40	2025-07-28 14:06:43.389	156.50	2025-07-28 14:01:58.125	123.70	2025-07-28 14:08:21.168	82.27	2025-07-28 14:13:29.198	29.70	2025-07-28 14:14:45.024	0	2025-07-29 09:35:46.468
224.10	2025-07-28 13:57:15.675	174.40	2025-07-28 14:06:43.907	156.50	2025-07-28 14:01:58.628	123.70	2025-07-28 14:08:21.653	82.27	2025-07-28 14:13:29.684	29.06	2025-07-28 14:14:45.527	0	2025-07-29 09:35:46.973
220.90	2025-07-28 13:57:16.180	174.40	2025-07-28 14:06:44.394	159.60	2025-07-28 14:01:59.136	124.00	2025-07-28 14:08:22.143	78.84	2025-07-28 14:13:30.187	29.06	2025-07-28 14:14:46.027	0	2025-07-29 09:35:47.475
220.90	2025-07-28 13:57:16.683	172.10	2025-07-28 14:06:44.932	159.60	2025-07-28 14:01:59.621	124.00	2025-07-28 14:08:22.647	78.84	2025-07-28 14:13:30.693	29.06	2025-07-28 14:14:46.530	0	2025-07-29 09:35:47.979
220.90	2025-07-28 13:57:17.185	172.10	2025-07-28 14:06:45.387	159.60	2025-07-28 14:02:00.127	124.00	2025-07-28 14:08:23.167	78.84	2025-07-28 14:13:31.195	29.60	2025-07-28 14:14:47.022	0	2025-07-29 09:35:48.465
213.50	2025-07-28 13:57:17.689	161.40	2025-07-28 14:06:45.888	163.50	2025-07-28 14:02:00.630	126.10	2025-07-28 14:08:23.655	77.64	2025-07-28 14:13:31.700	29.60	2025-07-28 14:14:47.526	0	2025-07-29 09:35:48.970
212.97		176.70		139.47		107.75		78.07		44.19		0	

Tabel L.6 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 5 mm

Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg		2.5 kg		3 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	469.00	2025-07-29 09:35:34.474	420.60	2025-07-29 09:37:46.639	386.00	2025-07-29 09:42:32.734	355.30	2025-07-29 09:44:16.538	320.10	2025-07-29 09:45:47.923	284.10	2025-07-29 09:48:00.824	253.60	2025-07-29 09:49:42.257
2	468.80	2025-07-29 09:35:34.981	420.60	2025-07-29 09:37:47.158	386.00	2025-07-29 09:42:33.222	355.20	2025-07-29 09:44:17.045	320.10	2025-07-29 09:45:48.414	284.10	2025-07-29 09:48:01.328	253.60	2025-07-29 09:49:42.762
3	468.80	2025-07-29 09:35:35.485	423.10	2025-07-29 09:37:47.650	385.70	2025-07-29 09:42:33.727	355.20	2025-07-29 09:44:17.549	320.10	2025-07-29 09:45:48.916	284.10	2025-07-29 09:48:01.831	255.40	2025-07-29 09:49:43.268
4	468.70	2025-07-29 09:35:35.971	423.10	2025-07-29 09:37:48.153	385.70	2025-07-29 09:42:34.229	355.20	2025-07-29 09:44:18.052	307.10	2025-07-29 09:45:49.420	283.50	2025-07-29 09:48:02.337	255.40	2025-07-29 09:49:43.770
5	468.70	2025-07-29 09:35:36.475	423.10	2025-07-29 09:37:48.637	385.70	2025-07-29 09:42:34.734	351.80	2025-07-29 09:44:18.539	307.10	2025-07-29 09:45:49.923	283.50	2025-07-29 09:48:02.825	255.40	2025-07-29 09:49:44.272
6	468.70	2025-07-29 09:35:36.976	424.70	2025-07-29 09:37:49.145	385.40	2025-07-29 09:42:35.218	351.80	2025-07-29 09:44:19.046	302.40	2025-07-29 09:45:50.412	282.50	2025-07-29 09:48:03.329	255.90	2025-07-29 09:49:44.762
7	469.30	2025-07-29 09:35:37.466	424.70	2025-07-29 09:37:49.644	385.40	2025-07-29 09:42:35.726	355.10	2025-07-29 09:44:19.549	302.40	2025-07-29 09:45:50.933	282.50	2025-07-29 09:48:03.829	255.90	2025-07-29 09:49:45.266
8	469.30	2025-07-29 09:35:37.968	421.80	2025-07-29 09:37:50.151	387.30	2025-07-29 09:42:36.228	355.10	2025-07-29 09:44:20.037	302.40	2025-07-29 09:45:51.420	284.90	2025-07-29 09:48:04.336	255.80	2025-07-29 09:49:45.769
9	469.80	2025-07-29 09:35:38.472	421.80	2025-07-29 09:37:50.636	387.30	2025-07-29 09:42:36.733	358.00	2025-07-29 09:44:20.541	306.60	2025-07-29 09:45:51.921	284.90	2025-07-29 09:48:04.823	255.80	2025-07-29 09:49:46.259
10	469.80	2025-07-29 09:35:38.976	424.00	2025-07-29 09:37:51.143	389.80	2025-07-29 09:42:37.221	358.00	2025-07-29 09:44:21.042	306.60	2025-07-29 09:45:52.411	286.90	2025-07-29 09:48:05.324	255.80	2025-07-29 09:49:46.760
11	469.90	2025-07-29 09:35:39.463	424.00	2025-07-29 09:37:51.644	389.80	2025-07-29 09:42:37.725	354.90	2025-07-29 09:44:21.548	309.40	2025-07-29 09:45:52.915	286.90	2025-07-29 09:48:05.831	256.10	2025-07-29 09:49:47.263
12	469.90	2025-07-29 09:35:39.967	427.60	2025-07-29 09:37:52.146	389.60	2025-07-29 09:42:38.225	354.90	2025-07-29 09:44:22.033	309.40	2025-07-29 09:45:53.419	286.20	2025-07-29 09:48:06.332	256.10	2025-07-29 09:49:47.768
13	469.00	2025-07-29 09:35:40.471	427.60	2025-07-29 09:37:52.635	389.60	2025-07-29 09:42:38.729	351.90	2025-07-29 09:44:22.537	308.60	2025-07-29 09:45:53.923	286.20	2025-07-29 09:48:06.838	257.20	2025-07-29 09:49:48.257
14	469.00	2025-07-29 09:35:40.974	428.50	2025-07-29 09:37:53.139	389.50	2025-07-29 09:42:39.233	351.90	2025-07-29 09:44:23.041	308.60	2025-07-29 09:45:54.408	286.10	2025-07-29 09:48:07.323	257.20	2025-07-29 09:49:48.760
15	466.60	2025-07-29 09:35:41.479	428.50	2025-07-29 09:37:53.641	389.50	2025-07-29 09:42:39.722	355.30	2025-07-29 09:44:23.547	312.90	2025-07-29 09:45:54.913	286.10	2025-07-29 09:48:07.828	257.20	2025-07-29 09:49:49.265
16	466.60	2025-07-29 09:35:41.966	428.50	2025-07-29 09:37:54.147	389.90	2025-07-29 09:42:40.227	355.30	2025-07-29 09:44:24.050	312.90	2025-07-29 09:45:55.432	286.40	2025-07-29 09:48:08.347	255.40	2025-07-29 09:49:49.766
17	468.80	2025-07-29 09:35:42.470	429.60	2025-07-29 09:37:54.650	389.90	2025-07-29 09:42:40.729	358.00	2025-07-29 09:44:24.536	312.90	2025-07-29 09:45:55.921	286.40	2025-07-29 09:48:08.835	255.40	2025-07-29 09:49:50.269
18	468.80	2025-07-29 09:35:42.974	429.60	2025-07-29 09:37:55.138	390.30	2025-07-29 09:42:41.233	358.00	2025-07-29 09:44:25.039	325.90	2025-07-29 09:45:56.424	285.40	2025-07-29 09:48:09.322	251.70	2025-07-29 09:49:50.758
19	470.40	2025-07-29 09:35:43.478	429.10	2025-07-29 09:37:55.642	390.30	2025-07-29 09:42:41.721	355.70	2025-07-29 09:44:25.562	325.90	2025-07-29 09:45:56.912	285.40	2025-07-29 09:48:09.826	251.70	2025-07-29 09:49:51.262
20	470.40	2025-07-29 09:35:43.964	429.10	2025-07-29 09:37:56.145	393.80	2025-07-29 09:42:42.224	355.70	2025-07-29 09:44:26.048	334.00	2025-07-29 09:45:57.416	285.40	2025-07-29 09:48:10.329	251.80	2025-07-29 09:49:51.765
21	469.80	2025-07-29 09:35:44.468	429.60	2025-07-29 09:37:56.665	393.80	2025-07-29 09:42:42.729	351.70	2025-07-29 09:44:26.534	334.00	2025-07-29 09:45:57.917	285.40	2025-07-29 09:48:10.836	251.80	2025-07-29 09:49:52.269
22	469.80	2025-07-29 09:35:44.988	429.60	2025-07-29 09:37:57.136	394.60	2025-07-29 09:42:43.232	351.70	2025-07-29 09:44:27.041	336.50	2025-07-29 09:45:58.421	285.40	2025-07-29 09:48:11.322	252.50	2025-07-29 09:49:52.756
23	468.30	2025-07-29 09:35:45.476	430.80	2025-07-29 09:37:57.640	394.60	2025-07-29 09:42:43.719	349.60	2025-07-29 09:44:27.575	336.50	2025-07-29 09:45:58.911	289.80	2025-07-29 09:48:11.824	252.50	2025-07-29 09:49:53.261
24	468.30	2025-07-29 09:35:45.964	430.80	2025-07-29 09:37:58.145	391.10	2025-07-29 09:42:44.226	349.60	2025-07-29 09:44:28.079	336.40	2025-07-29 09:45:59.430	289.80	2025-07-29 09:48:12.328	251.10	2025-07-29 09:49:53.763
25	465.30	2025-07-29 09:35:46.468	430.80	2025-07-29 09:37:58.650	391.10	2025-07-29 09:42:44.727	349.70	2025-07-29 09:44:28.533	336.40	2025-07-29 09:45:59.917	290.00	2025-07-29 09:48:12.832	251.10	2025-07-29 09:49:54.267
26	465.30	2025-07-29 09:35:46.973	434.10	2025-07-29 09:37:59.137	390.10	2025-07-29 09:42:45.230	349.70	2025-07-29 09:44:29.037	338.50	2025-07-29 09:46:00.435	290.00	2025-07-29 09:48:13.322	251.50	2025-07-29 09:49:54.755
27	460.80	2025-07-29 09:35:47.475	434.10	2025-07-29 09:37:59.639	390.10	2025-07-29 09:42:45.754	349.50	2025-07-29 09:44:29.543	338.50	2025-07-29 09:46:00.910	282.70	2025-07-29 09:48:13.825	251.50	2025-07-29 09:49:55.259
28	460.80	2025-07-29 09:35:47.979	441.90	2025-07-29 09:38:00.143	390.10	2025-07-29 09:42:46.222	349.50	2025-07-29 09:44:30.047	344.40	2025-07-29 09:46:01.414	282.70	2025-07-29 09:48:14.327	254.70	2025-07-29 09:49:55.762
29	460.90	2025-07-29 09:35:48.465	441.90	2025-07-29 09:38:00.648	390.30	2025-07-29 09:42:46.725	352.90	2025-07-29 09:44:30.548	344.40	2025-07-29 09:46:01.915	275.20	2025-07-29 09:48:14.835	254.70	2025-07-29 09:49:56.266
30	460.90	2025-07-29 09:35:48.970	446.00	2025-07-29 09:38:01.151	390.30	2025-07-29 09:42:47.229	352.90	2025-07-29 09:44:31.038	346.70	2025-07-29 09:46:02.419	275.20	2025-07-29 09:48:15.334	254.70	2025-07-29 09:49:56.770
	467.68		428.64		389.42		353.64		321.59		284.92		254.28	

3,5 kg		4 kg		4,5 kg		5 kg		5,5 kg		6 kg		6,5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
205.40	2025-07-29 09:57:24.929	186.10	2025-07-29 09:59:27.364	122.30	2025-07-29 10:01:39.669	88.68	2025-07-29 10:07:48.430	73.93	2025-07-29 10:09:41.197	48.21	2025-07-29 10:15:16.691	0	2025-07-29 10:43:46.520
205.40	2025-07-29 09:57:25.434	187.30	2025-07-29 09:59:27.865	130.70	2025-07-29 10:01:40.156	88.68	2025-07-29 10:07:48.934	73.93	2025-07-29 10:09:41.703	48.21	2025-07-29 10:15:17.194	0	2025-07-29 10:43:47.023
207.20	2025-07-29 09:57:25.938	187.30	2025-07-29 09:59:28.371	130.70	2025-07-29 10:01:40.660	93.30	2025-07-29 10:07:49.436	73.93	2025-07-29 10:09:42.190	48.21	2025-07-29 10:15:17.701	0	2025-07-29 10:43:47.527
207.20	2025-07-29 09:57:26.443	187.30	2025-07-29 09:59:28.872	130.70	2025-07-29 10:01:41.166	93.30	2025-07-29 10:07:49.925	77.17	2025-07-29 10:09:42.707	45.98	2025-07-29 10:15:18.202	0	2025-07-29 10:43:48.017
211.90	2025-07-29 09:57:26.943	185.50	2025-07-29 09:59:29.376	133.00	2025-07-29 10:01:41.666	93.30	2025-07-29 10:07:50.430	77.17	2025-07-29 10:09:43.195	45.98	2025-07-29 10:15:18.690	0	2025-07-29 10:43:48.519
211.90	2025-07-29 09:57:27.437	185.50	2025-07-29 09:59:29.866	133.00	2025-07-29 10:01:42.157	94.49	2025-07-29 10:07:50.917	77.17	2025-07-29 10:09:43.703	43.28	2025-07-29 10:15:19.195	0	2025-07-29 10:43:49.038
217.10	2025-07-29 09:57:27.940	180.80	2025-07-29 09:59:30.369	133.00	2025-07-29 10:01:42.661	94.49	2025-07-29 10:07:51.419	77.17	2025-07-29 10:09:44.188	43.28	2025-07-29 10:15:19.696	0	2025-07-29 10:43:49.525
217.10	2025-07-29 09:57:28.441	180.80	2025-07-29 09:59:30.872	127.30	2025-07-29 10:01:43.163	96.31	2025-07-29 10:07:51.924	78.75	2025-07-29 10:09:44.694	43.28	2025-07-29 10:15:20.203	0	2025-07-29 10:43:50.012
217.10	2025-07-29 09:57:28.932	177.80	2025-07-29 09:59:31.375	127.30	2025-07-29 10:01:43.667	96.31	2025-07-29 10:07:52.428	78.75	2025-07-29 10:09:45.198	41.44	2025-07-29 10:15:20.689	0	2025-07-29 10:43:50.518
219.00	2025-07-29 09:57:29.431	177.80	2025-07-29 09:59:31.864	127.30	2025-07-29 10:01:44.153	96.31	2025-07-29 10:07:52.913	78.75	2025-07-29 10:09:45.699	41.44	2025-07-29 10:15:21.194	0	2025-07-29 10:43:51.021
219.00	2025-07-29 09:57:29.939	177.80	2025-07-29 09:59:32.367	121.80	2025-07-29 10:01:44.657	99.99	2025-07-29 10:07:53.420	77.86	2025-07-29 10:09:46.189	41.44	2025-07-29 10:15:21.709	0	2025-07-29 10:43:51.525
217.10	2025-07-29 09:57:30.441	181.60	2025-07-29 09:59:32.873	121.80	2025-07-29 10:01:45.163	99.99	2025-07-29 10:07:53.922	77.86	2025-07-29 10:09:46.692	39.33	2025-07-29 10:15:22.203	0	2025-07-29 10:43:52.028
217.10	2025-07-29 09:57:30.961	181.60	2025-07-29 09:59:33.376	121.80	2025-07-29 10:01:45.665	107.03	2025-07-29 10:07:54.427	77.86	2025-07-29 10:09:47.196	39.33	2025-07-29 10:15:22.704	0	2025-07-29 10:43:52.516
218.80	2025-07-29 09:57:31.448	186.30	2025-07-29 09:59:33.861	122.10	2025-07-29 10:01:46.171	107.03	2025-07-29 10:07:54.913	77.86	2025-07-29 10:09:47.699	44.74	2025-07-29 10:15:23.193	0	2025-07-29 10:43:53.019
218.80	2025-07-29 09:57:31.936	186.30	2025-07-29 09:59:34.365	122.10	2025-07-29 10:01:46.655	107.03	2025-07-29 10:07:55.419	78.43	2025-07-29 10:09:48.217	44.74	2025-07-29 10:15:23.695	0	2025-07-29 10:43:53.524
220.50	2025-07-29 09:57:32.440	181.80	2025-07-29 09:59:34.870	128.00	2025-07-29 10:01:47.161	108.69	2025-07-29 10:07:55.923	78.43	2025-07-29 10:09:48.692	44.74	2025-07-29 10:15:24.214	0	2025-07-29 10:43:54.044
220.50	2025-07-29 09:57:32.946	181.80	2025-07-29 09:59:35.375	128.00	2025-07-29 10:01:47.678	108.69	2025-07-29 10:07:56.427	78.43	2025-07-29 10:09:49.193	49.42	2025-07-29 10:15:24.704	0	2025-07-29 10:43:54.515
218.40	2025-07-29 09:57:33.433	176.00	2025-07-29 09:59:35.878	128.00	2025-07-29 10:01:48.169	108.08	2025-07-29 10:07:56.928	78.43	2025-07-29 10:09:49.698	49.42	2025-07-29 10:15:25.192	0	2025-07-29 10:43:55.019
218.40	2025-07-29 09:57:33.936	176.00	2025-07-29 09:59:36.364	140.00	2025-07-29 10:01:48.653	108.08	2025-07-29 10:07:57.417	75.13	2025-07-29 10:09:50.197	49.42	2025-07-29 10:15:25.694	0	2025-07-29 10:43:55.523
219.10	2025-07-29 09:57:34.440	170.00	2025-07-29 09:59:36.870	140.00	2025-07-29 10:01:49.161	108.08	2025-07-29 10:07:57.920	75.13	2025-07-29 10:09:50.687	39.00	2025-07-29 10:15:26.199	0	2025-07-29 10:43:56.028
219.10	2025-07-29 09:57:34.945	170.00	2025-07-29 09:59:37.374	149.10	2025-07-29 10:01:49.664	107.84	2025-07-29 10:07:58.425	75.13	2025-07-29 10:09:51.205	39.00	2025-07-29 10:15:26.703	0	2025-07-29 10:43:56.513
221.40	2025-07-29 09:57:35.445	170.00	2025-07-29 09:59:37.877	149.10	2025-07-29 10:01:50.168	107.84	2025-07-29 10:07:58.927	75.13	2025-07-29 10:09:51.695	39.00	2025-07-29 10:15:27.190	0	2025-07-29 10:43:57.017
221.40	2025-07-29 09:57:35.934	165.50	2025-07-29 09:59:38.363	154.40	2025-07-29 10:01:50.660	108.82	2025-07-29 10:07:59.413	74.85	2025-07-29 10:09:52.215	40.06	2025-07-29 10:15:27.692	0	2025-07-29 10:43:57.521
218.40	2025-07-29 09:57:36.438	165.50	2025-07-29 09:59:38.867	154.40	2025-07-29 10:01:51.157	108.82	2025-07-29 10:07:59.918	74.85	2025-07-29 10:09:52.686	40.06	2025-07-29 10:15:28.198	0	2025-07-29 10:43:58.026
218.40	2025-07-29 09:57:36.942	166.60	2025-07-29 09:59:39.373	154.40	2025-07-29 10:01:51.660	108.82	2025-07-29 10:08:00.423	74.85	2025-07-29 10:09:53.192	49.50	2025-07-29 10:15:28.697	0	2025-07-29 10:43:58.528
217.20	2025-07-29 09:57:37.429	166.60	2025-07-29 09:59:39.875	158.60	2025-07-29 10:01:52.167	112.40	2025-07-29 10:08:00.927	75.14	2025-07-29 10:09:53.695	49.50	2025-07-29 10:15:29.205	0	2025-07-29 10:43:59.019
217.20	2025-07-29 09:57:37.933	166.60	2025-07-29 09:59:40.362	158.60	2025-07-29 10:01:52.668	112.40	2025-07-29 10:08:01.415	75.14	2025-07-29 10:09:54.198	51.34	2025-07-29 10:15:29.691	0	2025-07-29 10:43:59.520
218.60	2025-07-29 09:57:38.435	166.60	2025-07-29 09:59:40.865	160.60	2025-07-29 10:01:53.158	114.00	2025-07-29 10:08:01.917	72.22	2025-07-29 10:09:54.702	51.34	2025-07-29 10:15:30.196	0	2025-07-29 10:44:00.024
218.60	2025-07-29 09:57:38.942	164.30	2025-07-29 09:59:41.372	160.60	2025-07-29 10:01:53.661	114.00	2025-07-29 10:08:02.421	72.22	2025-07-29 10:09:55.189	50.73	2025-07-29 10:15:30.698	0	2025-07-29 10:44:00.527
218.10	2025-07-29 09:57:39.445	164.30	2025-07-29 09:59:41.874	162.70	2025-07-29 10:01:54.165	115.30	2025-07-29 10:08:02.925	72.22	2025-07-29 10:09:55.693	50.73	2025-07-29 10:15:31.202	0	2025-07-29 10:44:01.016
216.51		176.71		137.71		103.60		76.13		45.07		0	

Tabel L.7 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 7 mm

Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	500.90	2025-07-30 10:09:57.603	462.90	2025-07-30 10:11:40.260	429.40	2025-07-30 10:34:50.150	402.00	2025-07-30 10:37:59.643	376.10	2025-07-30 10:39:52.693
2	505.60	2025-07-30 10:09:58.089	462.90	2025-07-30 10:11:40.784	429.40	2025-07-30 10:34:50.668	402.00	2025-07-30 10:38:00.146	378.50	2025-07-30 10:39:53.197
3	505.60	2025-07-30 10:09:58.596	463.20	2025-07-30 10:11:41.272	425.10	2025-07-30 10:34:51.175	401.50	2025-07-30 10:38:00.634	378.50	2025-07-30 10:39:53.685
4	510.00	2025-07-30 10:09:59.099	463.20	2025-07-30 10:11:41.789	425.10	2025-07-30 10:34:51.646	401.50	2025-07-30 10:38:01.140	377.80	2025-07-30 10:39:54.189
5	510.00	2025-07-30 10:09:59.600	463.00	2025-07-30 10:11:42.261	421.30	2025-07-30 10:34:52.151	400.60	2025-07-30 10:38:01.643	377.80	2025-07-30 10:39:54.694
6	512.90	2025-07-30 10:10:00.086	463.00	2025-07-30 10:11:42.767	421.30	2025-07-30 10:34:52.651	400.60	2025-07-30 10:38:02.146	372.10	2025-07-30 10:39:55.195
7	512.90	2025-07-30 10:10:00.594	464.40	2025-07-30 10:11:43.271	423.60	2025-07-30 10:34:53.174	397.30	2025-07-30 10:38:02.632	372.10	2025-07-30 10:39:55.699
8	512.90	2025-07-30 10:10:01.096	464.40	2025-07-30 10:11:43.773	423.60	2025-07-30 10:34:53.644	397.30	2025-07-30 10:38:03.137	372.10	2025-07-30 10:39:56.189
9	512.20	2025-07-30 10:10:01.601	467.90	2025-07-30 10:11:44.260	425.90	2025-07-30 10:34:54.162	394.40	2025-07-30 10:38:03.656	367.40	2025-07-30 10:39:56.692
10	512.20	2025-07-30 10:10:02.089	467.90	2025-07-30 10:11:44.764	425.90	2025-07-30 10:34:54.651	394.40	2025-07-30 10:38:04.146	367.40	2025-07-30 10:39:57.195
11	510.40	2025-07-30 10:10:02.592	473.00	2025-07-30 10:11:45.269	425.90	2025-07-30 10:34:55.157	392.00	2025-07-30 10:38:04.632	370.60	2025-07-30 10:39:57.700
12	510.40	2025-07-30 10:10:03.095	473.00	2025-07-30 10:11:45.773	424.80	2025-07-30 10:34:55.644	392.00	2025-07-30 10:38:05.137	370.60	2025-07-30 10:39:58.186
13	507.40	2025-07-30 10:10:03.600	476.10	2025-07-30 10:11:46.273	424.80	2025-07-30 10:34:56.148	391.90	2025-07-30 10:38:05.641	378.80	2025-07-30 10:39:58.691
14	507.40	2025-07-30 10:10:04.085	476.10	2025-07-30 10:11:46.764	422.60	2025-07-30 10:34:56.665	391.90	2025-07-30 10:38:06.145	378.80	2025-07-30 10:39:59.194
15	505.20	2025-07-30 10:10:04.592	475.70	2025-07-30 10:11:47.268	422.60	2025-07-30 10:34:57.153	394.70	2025-07-30 10:38:06.632	382.60	2025-07-30 10:39:59.697
16	505.20	2025-07-30 10:10:05.095	475.70	2025-07-30 10:11:47.772	425.50	2025-07-30 10:34:57.659	394.70	2025-07-30 10:38:07.134	382.60	2025-07-30 10:40:00.184
17	507.80	2025-07-30 10:10:05.599	474.60	2025-07-30 10:11:48.274	425.50	2025-07-30 10:34:58.144	400.40	2025-07-30 10:38:07.640	382.60	2025-07-30 10:40:00.688
18	507.80	2025-07-30 10:10:06.101	474.60	2025-07-30 10:11:48.760	431.40	2025-07-30 10:34:58.647	400.40	2025-07-30 10:38:08.142	379.40	2025-07-30 10:40:01.194
19	510.00	2025-07-30 10:10:06.588	469.80	2025-07-30 10:11:49.268	431.40	2025-07-30 10:34:59.151	404.30	2025-07-30 10:38:08.648	379.40	2025-07-30 10:40:01.698
20	510.00	2025-07-30 10:10:07.091	469.80	2025-07-30 10:11:49.769	431.40	2025-07-30 10:34:59.655	404.30	2025-07-30 10:38:09.134	374.10	2025-07-30 10:40:02.199
21	507.30	2025-07-30 10:10:07.598	469.80	2025-07-30 10:11:50.274	432.40	2025-07-30 10:35:00.142	404.30	2025-07-30 10:38:09.637	374.10	2025-07-30 10:40:02.688
22	507.30	2025-07-30 10:10:08.101	460.00	2025-07-30 10:11:50.759	432.40	2025-07-30 10:35:00.647	401.20	2025-07-30 10:38:10.142	367.40	2025-07-30 10:40:03.190
23	503.80	2025-07-30 10:10:08.589	460.00	2025-07-30 10:11:51.266	430.70	2025-07-30 10:35:01.149	401.20	2025-07-30 10:38:10.644	367.40	2025-07-30 10:40:03.696
24	503.80	2025-07-30 10:10:09.091	455.20	2025-07-30 10:11:51.765	430.70	2025-07-30 10:35:01.670	398.70	2025-07-30 10:38:11.133	360.00	2025-07-30 10:40:04.200
25	503.80	2025-07-30 10:10:09.595	455.20	2025-07-30 10:11:52.273	429.30	2025-07-30 10:35:02.143	398.70	2025-07-30 10:38:11.635	360.00	2025-07-30 10:40:04.687
26	497.90	2025-07-30 10:10:10.097	454.00	2025-07-30 10:11:52.777	429.30	2025-07-30 10:35:02.647	399.10	2025-07-30 10:38:12.138	354.50	2025-07-30 10:40:05.191
27	497.90	2025-07-30 10:10:10.585	454.00	2025-07-30 10:11:53.264	428.80	2025-07-30 10:35:03.149	399.10	2025-07-30 10:38:12.661	354.50	2025-07-30 10:40:05.693
28	493.40	2025-07-30 10:10:11.092	454.30	2025-07-30 10:11:53.769	428.80	2025-07-30 10:35:03.652	400.80	2025-07-30 10:38:13.131	352.10	2025-07-30 10:40:06.199
29	493.40	2025-07-30 10:10:11.596	454.30	2025-07-30 10:11:54.272	428.80	2025-07-30 10:35:04.140	400.80	2025-07-30 10:38:13.637	352.10	2025-07-30 10:40:06.684
30	495.90	2025-07-30 10:10:12.096	458.10	2025-07-30 10:11:54.774	426.10	2025-07-30 10:35:04.658	401.00	2025-07-30 10:38:14.140	351.30	2025-07-30 10:40:07.190
	506.04		465.20		427.13		398.77		370.42	

2.5 kg		3 kg		3,5 kg		4 kg		4,5 kg		5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
343.40	2025-07-30 10:42:25.161	332.00	2025-07-30 10:44:24.669	300.20	2025-07-30 10:46:49.607	252.50	2025-07-30 10:49:08.160	227.20	2025-07-30 10:51:24.630	181.20	2025-07-30 10:58:56.144
337.70	2025-07-30 10:42:25.646	335.20	2025-07-30 10:44:25.173	293.00	2025-07-30 10:46:50.113	252.00	2025-07-30 10:49:08.662	227.20	2025-07-30 10:51:25.134	184.30	2025-07-30 10:58:56.652
337.70	2025-07-30 10:42:26.149	335.20	2025-07-30 10:44:25.677	293.00	2025-07-30 10:46:50.600	252.00	2025-07-30 10:49:09.165	227.30	2025-07-30 10:51:25.640	184.30	2025-07-30 10:58:57.152
337.70	2025-07-30 10:42:26.637	328.50	2025-07-30 10:44:26.200	284.90	2025-07-30 10:46:51.121	252.00	2025-07-30 10:49:09.655	227.30	2025-07-30 10:51:26.126	188.10	2025-07-30 10:58:57.644
340.00	2025-07-30 10:42:27.141	328.50	2025-07-30 10:44:26.687	284.90	2025-07-30 10:46:51.624	249.10	2025-07-30 10:49:10.175	226.30	2025-07-30 10:51:26.630	188.10	2025-07-30 10:58:58.148
340.00	2025-07-30 10:42:27.643	328.50	2025-07-30 10:44:27.174	282.80	2025-07-30 10:46:52.111	249.10	2025-07-30 10:49:10.663	226.30	2025-07-30 10:51:27.132	188.10	2025-07-30 10:58:58.649
345.10	2025-07-30 10:42:28.149	316.90	2025-07-30 10:44:27.678	282.80	2025-07-30 10:46:52.597	247.90	2025-07-30 10:49:11.182	226.30	2025-07-30 10:51:27.637	188.40	2025-07-30 10:58:59.153
345.10	2025-07-30 10:42:28.636	316.90	2025-07-30 10:44:28.179	283.40	2025-07-30 10:46:53.103	247.90	2025-07-30 10:49:11.669	224.20	2025-07-30 10:51:28.126	188.40	2025-07-30 10:58:59.642
346.70	2025-07-30 10:42:29.139	307.30	2025-07-30 10:44:28.685	283.40	2025-07-30 10:46:53.610	247.90	2025-07-30 10:49:12.158	224.20	2025-07-30 10:51:28.630	189.30	2025-07-30 10:59:00.145
346.70	2025-07-30 10:42:29.644	307.30	2025-07-30 10:44:29.173	284.00	2025-07-30 10:46:54.128	250.60	2025-07-30 10:49:12.661	222.70	2025-07-30 10:51:29.134	189.30	2025-07-30 10:59:00.649
346.50	2025-07-30 10:42:30.146	301.30	2025-07-30 10:44:29.676	284.00	2025-07-30 10:46:54.617	250.60	2025-07-30 10:49:13.166	222.70	2025-07-30 10:51:29.636	189.30	2025-07-30 10:59:01.154
346.50	2025-07-30 10:42:30.634	301.30	2025-07-30 10:44:30.180	284.00	2025-07-30 10:46:55.103	254.10	2025-07-30 10:49:13.669	225.00	2025-07-30 10:51:30.140	194.30	2025-07-30 10:59:01.639
349.00	2025-07-30 10:42:31.139	300.30	2025-07-30 10:44:30.682	284.90	2025-07-30 10:46:55.607	254.10	2025-07-30 10:49:14.152	225.00	2025-07-30 10:51:30.626	194.30	2025-07-30 10:59:02.143
349.00	2025-07-30 10:42:31.643	300.30	2025-07-30 10:44:31.169	284.90	2025-07-30 10:46:56.140	257.00	2025-07-30 10:49:14.658	228.90	2025-07-30 10:51:31.131	196.90	2025-07-30 10:59:02.646
347.00	2025-07-30 10:42:32.146	300.80	2025-07-30 10:44:31.674	284.20	2025-07-30 10:46:56.612	257.00	2025-07-30 10:49:15.164	228.90	2025-07-30 10:51:31.634	196.90	2025-07-30 10:59:03.150
347.00	2025-07-30 10:42:32.650	300.80	2025-07-30 10:44:32.177	284.20	2025-07-30 10:46:57.101	257.00	2025-07-30 10:49:15.668	231.20	2025-07-30 10:51:32.139	196.90	2025-07-30 10:59:03.655
347.00	2025-07-30 10:42:33.140	301.70	2025-07-30 10:44:32.682	284.40	2025-07-30 10:46:57.606	264.00	2025-07-30 10:49:16.152	231.20	2025-07-30 10:51:32.626	198.80	2025-07-30 10:59:04.143
337.60	2025-07-30 10:42:33.656	301.70	2025-07-30 10:44:33.169	284.40	2025-07-30 10:46:58.110	264.00	2025-07-30 10:49:16.658	231.20	2025-07-30 10:51:33.129	198.80	2025-07-30 10:59:04.646
337.60	2025-07-30 10:42:34.146	304.20	2025-07-30 10:44:33.674	286.30	2025-07-30 10:46:58.612	268.90	2025-07-30 10:49:17.161	232.90	2025-07-30 10:51:33.634	199.80	2025-07-30 10:59:05.150
332.30	2025-07-30 10:42:34.648	304.20	2025-07-30 10:44:34.176	286.30	2025-07-30 10:46:59.100	268.90	2025-07-30 10:49:17.665	232.90	2025-07-30 10:51:34.153	199.80	2025-07-30 10:59:05.652
332.30	2025-07-30 10:42:35.137	303.50	2025-07-30 10:44:34.680	285.20	2025-07-30 10:46:59.605	267.80	2025-07-30 10:49:18.170	231.90	2025-07-30 10:51:34.625	199.80	2025-07-30 10:59:06.142
331.90	2025-07-30 10:42:35.640	303.50	2025-07-30 10:44:35.183	285.20	2025-07-30 10:47:00.106	267.80	2025-07-30 10:49:18.658	231.90	2025-07-30 10:51:35.128	195.80	2025-07-30 10:59:06.647
331.90	2025-07-30 10:42:36.143	302.00	2025-07-30 10:44:35.670	281.80	2025-07-30 10:47:00.611	266.80	2025-07-30 10:49:19.160	229.50	2025-07-30 10:51:35.631	195.80	2025-07-30 10:59:07.150
330.20	2025-07-30 10:42:36.648	302.00	2025-07-30 10:44:36.175	281.80	2025-07-30 10:47:01.114	266.80	2025-07-30 10:49:19.662	229.50	2025-07-30 10:51:36.135	191.20	2025-07-30 10:59:07.652
330.20	2025-07-30 10:42:37.135	305.50	2025-07-30 10:44:36.679	281.80	2025-07-30 10:47:01.604	266.80	2025-07-30 10:49:20.166	226.70	2025-07-30 10:51:36.642	191.20	2025-07-30 10:59:08.142
330.20	2025-07-30 10:42:37.639	305.50	2025-07-30 10:44:37.184	278.20	2025-07-30 10:47:02.106	265.20	2025-07-30 10:49:20.657	226.70	2025-07-30 10:51:37.126	191.20	2025-07-30 10:59:08.645
327.90	2025-07-30 10:42:38.143	309.30	2025-07-30 10:44:37.688	278.20	2025-07-30 10:47:02.608	265.20	2025-07-30 10:49:21.157	222.90	2025-07-30 10:51:37.632	186.10	2025-07-30 10:59:09.150
327.90	2025-07-30 10:42:38.646	309.30	2025-07-30 10:44:38.175	272.80	2025-07-30 10:47:03.115	261.70	2025-07-30 10:49:21.662	222.90	2025-07-30 10:51:38.134	186.10	2025-07-30 10:59:09.651
327.50	2025-07-30 10:42:39.152	312.50	2025-07-30 10:44:38.683	272.80	2025-07-30 10:47:03.601	261.70	2025-07-30 10:49:22.168	222.90	2025-07-30 10:51:38.641	180.30	2025-07-30 10:59:10.156
327.50	2025-07-30 10:42:39.637	312.50	2025-07-30 10:44:39.183	265.60	2025-07-30 10:47:04.104	256.80	2025-07-30 10:49:22.656	219.80	2025-07-30 10:51:39.127	180.30	2025-07-30 10:59:10.656
338.57		310.62		283.45		258.11		227.12		191.10	

5,5 kg		6 kg		6,5 kg		7 kg		7,5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
147.30	2025-07-30 11:07:22.303	113.80	2025-07-30 11:12:20.247	75.03	2025-07-30 11:15:02.313	52.10	2025-07-30 11:19:16.792	0	2025-07-29 14:13:37.023
151.00	2025-07-30 11:07:22.793	113.80	2025-07-30 11:12:20.732	75.03	2025-07-30 11:15:02.817	52.10	2025-07-30 11:19:17.295	0	2025-07-29 14:13:37.511
151.00	2025-07-30 11:07:23.296	118.40	2025-07-30 11:12:21.238	75.03	2025-07-30 11:15:03.320	39.84	2025-07-30 11:19:17.797	0	2025-07-29 14:13:38.017
151.00	2025-07-30 11:07:23.801	118.40	2025-07-30 11:12:21.742	77.13	2025-07-30 11:15:03.810	39.84	2025-07-30 11:19:18.301	0	2025-07-29 14:13:38.519
157.90	2025-07-30 11:07:24.303	118.40	2025-07-30 11:12:22.246	77.13	2025-07-30 11:15:04.314	37.37	2025-07-30 11:19:18.806	0	2025-07-29 14:13:39.022
157.90	2025-07-30 11:07:24.791	121.50	2025-07-30 11:12:22.749	77.13	2025-07-30 11:15:04.818	37.37	2025-07-30 11:19:19.294	0	2025-07-29 14:13:39.510
163.70	2025-07-30 11:07:25.298	121.50	2025-07-30 11:12:23.237	84.00	2025-07-30 11:15:05.320	49.40	2025-07-30 11:19:19.797	0	2025-07-29 14:13:40.016
163.70	2025-07-30 11:07:25.800	121.30	2025-07-30 11:12:23.740	84.00	2025-07-30 11:15:05.822	49.40	2025-07-30 11:19:20.301	0	2025-07-29 14:13:40.517
166.20	2025-07-30 11:07:26.302	121.30	2025-07-30 11:12:24.245	86.16	2025-07-30 11:15:06.312	51.53	2025-07-30 11:19:20.804	0	2025-07-29 14:13:41.020
166.20	2025-07-30 11:07:26.791	119.30	2025-07-30 11:12:24.748	86.16	2025-07-30 11:15:06.814	51.53	2025-07-30 11:19:21.291	0	2025-07-29 14:13:41.525
162.40	2025-07-30 11:07:27.294	119.30	2025-07-30 11:12:25.237	86.16	2025-07-30 11:15:07.318	51.53	2025-07-30 11:19:21.795	0	2025-07-29 14:13:42.012
162.40	2025-07-30 11:07:27.800	115.00	2025-07-30 11:12:25.742	87.62	2025-07-30 11:15:07.805	55.65	2025-07-30 11:19:22.300	0	2025-07-29 14:13:42.517
162.40	2025-07-30 11:07:28.303	115.00	2025-07-30 11:12:26.246	87.62	2025-07-30 11:15:08.312	55.65	2025-07-30 11:19:22.802	0	2025-07-29 14:13:43.019
155.20	2025-07-30 11:07:28.807	115.00	2025-07-30 11:12:26.749	87.62	2025-07-30 11:15:08.812	55.65	2025-07-30 11:19:23.291	0	2025-07-29 14:13:43.525
155.20	2025-07-30 11:07:29.293	115.00	2025-07-30 11:12:27.237	89.90	2025-07-30 11:15:09.319	55.65	2025-07-30 11:19:23.794	0	2025-07-29 14:13:44.010
150.40	2025-07-30 11:07:29.799	115.00	2025-07-30 11:12:27.738	89.90	2025-07-30 11:15:09.822	58.90	2025-07-30 11:19:24.299	0	2025-07-29 14:13:44.515
150.40	2025-07-30 11:07:30.301	119.70	2025-07-30 11:12:28.241	90.52	2025-07-30 11:15:10.307	58.90	2025-07-30 11:19:24.802	0	2025-07-29 14:13:45.018
150.20	2025-07-30 11:07:30.807	119.70	2025-07-30 11:12:28.746	90.52	2025-07-30 11:15:10.811	58.90	2025-07-30 11:19:25.308	0	2025-07-29 14:13:45.522
150.20	2025-07-30 11:07:31.291	120.50	2025-07-30 11:12:29.249	90.52	2025-07-30 11:15:11.315	58.90	2025-07-30 11:19:25.792	0	2025-07-29 14:13:46.024
150.20	2025-07-30 11:07:31.797	120.50	2025-07-30 11:12:29.785	91.95	2025-07-30 11:15:11.821	54.71	2025-07-30 11:19:26.297	0	2025-07-29 14:13:46.513
150.80	2025-07-30 11:07:32.299	120.70	2025-07-30 11:12:30.242	91.95	2025-07-30 11:15:12.309	54.71	2025-07-30 11:19:26.800	0	2025-07-29 14:13:47.019
150.80	2025-07-30 11:07:32.802	120.70	2025-07-30 11:12:30.747	91.95	2025-07-30 11:15:12.811	52.07	2025-07-30 11:19:27.307	0	2025-07-29 14:13:47.520
149.70	2025-07-30 11:07:33.290	122.60	2025-07-30 11:12:31.251	93.77	2025-07-30 11:15:13.314	52.07	2025-07-30 11:19:27.794	0	2025-07-29 14:13:48.022
149.70	2025-07-30 11:07:33.796	122.60	2025-07-30 11:12:31.736	93.77	2025-07-30 11:15:13.834	52.04	2025-07-30 11:19:28.297	0	2025-07-29 14:13:48.511
149.70	2025-07-30 11:07:34.298	124.10	2025-07-30 11:12:32.242	90.93	2025-07-30 11:15:14.304	52.04	2025-07-30 11:19:28.800	0	2025-07-29 14:13:49.017
148.40	2025-07-30 11:07:34.802	124.10	2025-07-30 11:12:32.745	90.93	2025-07-30 11:15:14.811	52.04	2025-07-30 11:19:29.306	0	2025-07-29 14:13:49.522
148.40	2025-07-30 11:07:35.306	124.90	2025-07-30 11:12:33.249	90.93	2025-07-30 11:15:15.315	52.04	2025-07-30 11:19:29.793	0	2025-07-29 14:13:50.025
147.30	2025-07-30 11:07:35.794	124.90	2025-07-30 11:12:33.735	90.25	2025-07-30 11:15:15.819	53.05	2025-07-30 11:19:30.309	0	2025-07-29 14:13:50.514
147.30	2025-07-30 11:07:36.298	124.30	2025-07-30 11:12:34.241	90.25	2025-07-30 11:15:16.307	53.05	2025-07-30 11:19:30.799	0	2025-07-29 14:13:51.015
147.30	2025-07-30 11:07:36.800	124.30	2025-07-30 11:12:34.745	92.35	2025-07-30 11:15:16.809	51.32	2025-07-30 11:19:31.305	0	2025-07-29 14:13:51.518
153.81		119.85		86.87		51.65		0	

Tabel L.8 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 9 mm

Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	493.10	2025-07-29 10:43:46.520	453.60	2025-07-29 10:45:33.916	402.80	2025-07-29 10:47:13.393	397.50	2025-07-29 10:49:06.545	314.10	2025-07-29 10:51:26.462
2	491.60	2025-07-29 10:43:47.023	453.60	2025-07-29 10:45:34.423	402.80	2025-07-29 10:47:13.884	397.50	2025-07-29 10:49:07.052	333.80	2025-07-29 10:51:26.952
3	491.60	2025-07-29 10:43:47.527	453.70	2025-07-29 10:45:34.910	400.90	2025-07-29 10:47:14.387	395.30	2025-07-29 10:49:07.540	333.80	2025-07-29 10:51:27.456
4	486.60	2025-07-29 10:43:48.017	453.70	2025-07-29 10:45:35.429	400.90	2025-07-29 10:47:14.891	395.30	2025-07-29 10:49:08.060	333.80	2025-07-29 10:51:27.957
5	486.60	2025-07-29 10:43:48.519	454.70	2025-07-29 10:45:35.917	413.40	2025-07-29 10:47:15.394	389.70	2025-07-29 10:49:08.561	338.40	2025-07-29 10:51:28.462
6	486.60	2025-07-29 10:43:49.038	454.70	2025-07-29 10:45:36.421	413.40	2025-07-29 10:47:15.884	389.70	2025-07-29 10:49:09.067	338.40	2025-07-29 10:51:28.967
7	481.90	2025-07-29 10:43:49.525	456.80	2025-07-29 10:45:36.909	415.90	2025-07-29 10:47:16.388	386.20	2025-07-29 10:49:09.536	339.80	2025-07-29 10:51:29.467
8	481.90	2025-07-29 10:43:50.012	456.80	2025-07-29 10:45:37.409	415.90	2025-07-29 10:47:16.889	386.20	2025-07-29 10:49:10.043	339.80	2025-07-29 10:51:29.956
9	481.50	2025-07-29 10:43:50.518	454.30	2025-07-29 10:45:37.915	415.90	2025-07-29 10:47:17.394	382.30	2025-07-29 10:49:10.546	345.30	2025-07-29 10:51:30.457
10	481.50	2025-07-29 10:43:51.021	454.30	2025-07-29 10:45:38.419	414.00	2025-07-29 10:47:17.898	382.30	2025-07-29 10:49:11.052	345.30	2025-07-29 10:51:30.949
11	483.80	2025-07-29 10:43:51.525	449.60	2025-07-29 10:45:38.923	414.00	2025-07-29 10:47:18.387	382.00	2025-07-29 10:49:11.536	349.40	2025-07-29 10:51:31.454
12	483.80	2025-07-29 10:43:52.028	449.60	2025-07-29 10:45:39.460	412.90	2025-07-29 10:47:18.890	382.00	2025-07-29 10:49:12.040	349.40	2025-07-29 10:51:31.955
13	485.10	2025-07-29 10:43:52.516	446.90	2025-07-29 10:45:39.914	412.90	2025-07-29 10:47:19.392	384.20	2025-07-29 10:49:12.545	349.00	2025-07-29 10:51:32.461
14	485.10	2025-07-29 10:43:53.019	446.90	2025-07-29 10:45:40.419	411.80	2025-07-29 10:47:19.911	384.20	2025-07-29 10:49:13.049	349.00	2025-07-29 10:51:32.963
15	488.40	2025-07-29 10:43:53.524	446.90	2025-07-29 10:45:40.922	411.80	2025-07-29 10:47:20.386	384.20	2025-07-29 10:49:13.570	347.70	2025-07-29 10:51:33.452
16	488.40	2025-07-29 10:43:54.044	449.10	2025-07-29 10:45:41.409	413.90	2025-07-29 10:47:20.889	385.40	2025-07-29 10:49:14.041	347.70	2025-07-29 10:51:33.954
17	488.40	2025-07-29 10:43:54.515	449.10	2025-07-29 10:45:41.913	413.90	2025-07-29 10:47:21.391	385.40	2025-07-29 10:49:14.543	345.90	2025-07-29 10:51:34.458
18	492.30	2025-07-29 10:43:55.019	450.70	2025-07-29 10:45:42.419	416.30	2025-07-29 10:47:21.896	382.80	2025-07-29 10:49:15.048	345.90	2025-07-29 10:51:34.977
19	492.30	2025-07-29 10:43:55.523	450.70	2025-07-29 10:45:42.922	416.30	2025-07-29 10:47:22.383	382.80	2025-07-29 10:49:15.552	346.20	2025-07-29 10:51:35.452
20	493.00	2025-07-29 10:43:56.028	451.40	2025-07-29 10:45:43.408	415.90	2025-07-29 10:47:22.904	379.90	2025-07-29 10:49:16.040	346.20	2025-07-29 10:51:35.955
21	493.00	2025-07-29 10:43:56.513	451.40	2025-07-29 10:45:43.912	415.90	2025-07-29 10:47:23.393	379.90	2025-07-29 10:49:16.541	350.50	2025-07-29 10:51:36.459
22	491.60	2025-07-29 10:43:57.017	451.90	2025-07-29 10:45:44.416	413.60	2025-07-29 10:47:23.895	379.50	2025-07-29 10:49:17.047	350.50	2025-07-29 10:51:36.961
23	491.60	2025-07-29 10:43:57.521	451.90	2025-07-29 10:45:44.920	413.60	2025-07-29 10:47:24.417	379.50	2025-07-29 10:49:17.565	351.60	2025-07-29 10:51:37.447
24	490.00	2025-07-29 10:43:58.026	446.10	2025-07-29 10:45:45.408	409.80	2025-07-29 10:47:24.885	377.30	2025-07-29 10:49:18.054	351.60	2025-07-29 10:51:37.953
25	490.00	2025-07-29 10:43:58.528	446.10	2025-07-29 10:45:45.911	409.80	2025-07-29 10:47:25.390	377.30	2025-07-29 10:49:18.539	349.00	2025-07-29 10:51:38.455
26	489.70	2025-07-29 10:43:59.019	441.60	2025-07-29 10:45:46.417	409.30	2025-07-29 10:47:25.895	373.80	2025-07-29 10:49:19.045	349.00	2025-07-29 10:51:38.958
27	489.70	2025-07-29 10:43:59.520	441.60	2025-07-29 10:45:46.919	409.30	2025-07-29 10:47:26.398	373.80	2025-07-29 10:49:19.549	347.20	2025-07-29 10:51:39.463
28	489.70	2025-07-29 10:44:00.024	441.60	2025-07-29 10:45:47.424	409.30	2025-07-29 10:47:26.886	373.80	2025-07-29 10:49:20.052	347.20	2025-07-29 10:51:39.950
29	490.40	2025-07-29 10:44:00.527	440.90	2025-07-29 10:45:47.909	411.20	2025-07-29 10:47:27.390	371.80	2025-07-29 10:49:20.538	347.80	2025-07-29 10:51:40.453
30	490.40	2025-07-29 10:44:01.016	440.90	2025-07-29 10:45:48.414	411.20	2025-07-29 10:47:27.893	371.80	2025-07-29 10:49:21.044	347.80	2025-07-29 10:51:40.957
	488.32		449.70		411.62		383.11		344.37	

2.5 kg		3 kg		3,5 kg		4 kg		4,5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
297.00	2025-07-29 10:53:11.181	281.60	2025-07-29 10:55:19.546	233.90	2025-07-29 10:57:05.872	215.20	2025-07-29 10:59:15.291	178.20	2025-07-29 11:00:52.207
305.60	2025-07-29 10:53:11.684	279.90	2025-07-29 10:55:20.017	233.90	2025-07-29 10:57:06.414	215.20	2025-07-29 10:59:15.798	178.20	2025-07-29 11:00:52.678
305.60	2025-07-29 10:53:12.190	279.90	2025-07-29 10:55:20.517	235.70	2025-07-29 10:57:06.883	214.30	2025-07-29 10:59:16.285	180.80	2025-07-29 11:00:53.182
311.80	2025-07-29 10:53:12.692	280.30	2025-07-29 10:55:21.025	235.70	2025-07-29 10:57:07.374	214.30	2025-07-29 10:59:16.803	180.80	2025-07-29 11:00:53.686
311.80	2025-07-29 10:53:13.196	280.30	2025-07-29 10:55:21.530	236.50	2025-07-29 10:57:07.874	216.00	2025-07-29 10:59:17.290	177.60	2025-07-29 11:00:54.192
313.00	2025-07-29 10:53:13.684	280.30	2025-07-29 10:55:22.032	236.50	2025-07-29 10:57:08.378	216.00	2025-07-29 10:59:17.796	177.60	2025-07-29 11:00:54.696
313.00	2025-07-29 10:53:14.202	280.30	2025-07-29 10:55:22.519	232.90	2025-07-29 10:57:08.884	216.20	2025-07-29 10:59:18.285	177.60	2025-07-29 11:00:55.184
315.90	2025-07-29 10:53:14.694	280.30	2025-07-29 10:55:23.022	232.90	2025-07-29 10:57:09.369	216.20	2025-07-29 10:59:18.786	170.60	2025-07-29 11:00:55.687
315.90	2025-07-29 10:53:15.197	278.90	2025-07-29 10:55:23.527	229.50	2025-07-29 10:57:09.876	219.10	2025-07-29 10:59:19.291	170.60	2025-07-29 11:00:56.190
315.90	2025-07-29 10:53:15.686	278.90	2025-07-29 10:55:24.030	229.50	2025-07-29 10:57:10.380	219.10	2025-07-29 10:59:19.792	167.20	2025-07-29 11:00:56.691
314.70	2025-07-29 10:53:16.190	279.40	2025-07-29 10:55:24.516	233.60	2025-07-29 10:57:10.883	221.20	2025-07-29 10:59:20.297	167.20	2025-07-29 11:00:57.195
314.70	2025-07-29 10:53:16.691	279.40	2025-07-29 10:55:25.023	233.60	2025-07-29 10:57:11.371	221.20	2025-07-29 10:59:20.785	169.20	2025-07-29 11:00:57.684
308.60	2025-07-29 10:53:17.196	278.60	2025-07-29 10:55:25.526	233.60	2025-07-29 10:57:11.872	221.20	2025-07-29 10:59:21.291	169.20	2025-07-29 11:00:58.203
308.60	2025-07-29 10:53:17.682	278.60	2025-07-29 10:55:26.028	243.20	2025-07-29 10:57:12.378	218.60	2025-07-29 10:59:21.806	169.20	2025-07-29 11:00:58.689
308.60	2025-07-29 10:53:18.186	273.30	2025-07-29 10:55:26.516	243.20	2025-07-29 10:57:12.881	218.60	2025-07-29 10:59:22.298	173.50	2025-07-29 11:00:59.209
308.60	2025-07-29 10:53:18.689	273.30	2025-07-29 10:55:27.022	251.20	2025-07-29 10:57:13.383	210.40	2025-07-29 10:59:22.785	173.50	2025-07-29 11:00:59.684
310.50	2025-07-29 10:53:19.195	270.20	2025-07-29 10:55:27.525	251.20	2025-07-29 10:57:13.873	210.40	2025-07-29 10:59:23.289	179.00	2025-07-29 11:01:00.216
310.50	2025-07-29 10:53:19.697	270.20	2025-07-29 10:55:28.043	254.50	2025-07-29 10:57:14.377	204.80	2025-07-29 10:59:23.792	179.00	2025-07-29 11:01:00.706
310.50	2025-07-29 10:53:20.184	270.20	2025-07-29 10:55:28.530	254.50	2025-07-29 10:57:14.881	204.80	2025-07-29 10:59:24.297	182.90	2025-07-29 11:01:01.177
310.00	2025-07-29 10:53:20.688	273.00	2025-07-29 10:55:29.019	254.50	2025-07-29 10:57:15.382	204.80	2025-07-29 10:59:24.782	182.90	2025-07-29 11:01:01.680
310.00	2025-07-29 10:53:21.192	273.00	2025-07-29 10:55:29.521	256.20	2025-07-29 10:57:15.871	206.20	2025-07-29 10:59:25.287	182.40	2025-07-29 11:01:02.185
310.00	2025-07-29 10:53:21.711	276.80	2025-07-29 10:55:30.026	256.20	2025-07-29 10:57:16.372	206.20	2025-07-29 10:59:25.789	182.40	2025-07-29 11:01:02.688
310.00	2025-07-29 10:53:22.199	276.80	2025-07-29 10:55:30.529	256.50	2025-07-29 10:57:16.877	209.40	2025-07-29 10:59:26.296	182.40	2025-07-29 11:01:03.175
310.20	2025-07-29 10:53:22.689	278.20	2025-07-29 10:55:31.035	256.50	2025-07-29 10:57:17.383	209.40	2025-07-29 10:59:26.796	177.00	2025-07-29 11:01:03.680
310.20	2025-07-29 10:53:23.193	278.20	2025-07-29 10:55:31.554	256.50	2025-07-29 10:57:17.871	211.40	2025-07-29 10:59:27.284	177.00	2025-07-29 11:01:04.183
310.20	2025-07-29 10:53:23.729	276.50	2025-07-29 10:55:32.024	254.40	2025-07-29 10:57:18.373	211.40	2025-07-29 10:59:27.790	171.10	2025-07-29 11:01:04.703
308.70	2025-07-29 10:53:24.182	276.50	2025-07-29 10:55:32.527	254.40	2025-07-29 10:57:18.877	211.40	2025-07-29 10:59:28.294	171.10	2025-07-29 11:01:05.207
308.70	2025-07-29 10:53:24.686	273.40	2025-07-29 10:55:33.018	250.10	2025-07-29 10:57:19.379	210.10	2025-07-29 10:59:28.797	171.90	2025-07-29 11:01:05.694
307.20	2025-07-29 10:53:25.208	273.40	2025-07-29 10:55:33.521	250.10	2025-07-29 10:57:19.885	210.10	2025-07-29 10:59:29.284	171.90	2025-07-29 11:01:06.183
307.20	2025-07-29 10:53:25.694	272.20	2025-07-29 10:55:34.025	247.40	2025-07-29 10:57:20.371	207.40	2025-07-29 10:59:29.788	171.90	2025-07-29 11:01:06.686
310.11		276.73		244.28		213.02		175.46	

5 kg		5,5 kg		6 kg		6,5 kg		7 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
139.40	2025-07-29 11:02:48.278	97.33	2025-07-29 11:06:19.623	66.86	2025-07-29 11:08:35.000	52.89	2025-07-29 11:12:18.689	0	2025-07-30 10:09:57.603
139.40	2025-07-29 11:02:48.781	97.33	2025-07-29 11:06:20.112	66.86	2025-07-29 11:08:35.521	52.89	2025-07-29 11:12:19.195	0	2025-07-30 10:09:58.089
139.40	2025-07-29 11:02:49.284	103.23	2025-07-29 11:06:20.601	66.86	2025-07-29 11:08:35.992	52.89	2025-07-29 11:12:19.680	0	2025-07-30 10:09:58.596
139.50	2025-07-29 11:02:49.791	103.23	2025-07-29 11:06:21.105	68.62	2025-07-29 11:08:36.496	46.67	2025-07-29 11:12:20.186	0	2025-07-30 10:09:59.099
139.50	2025-07-29 11:02:50.278	107.19	2025-07-29 11:06:21.608	68.62	2025-07-29 11:08:36.999	46.67	2025-07-29 11:12:20.685	0	2025-07-30 10:09:59.600
137.20	2025-07-29 11:02:50.778	107.19	2025-07-29 11:06:22.110	68.62	2025-07-29 11:08:37.506	42.52	2025-07-29 11:12:21.190	0	2025-07-30 10:10:00.086
137.20	2025-07-29 11:02:51.286	107.19	2025-07-29 11:06:22.600	68.62	2025-07-29 11:08:37.993	42.52	2025-07-29 11:12:21.743	0	2025-07-30 10:10:00.594
137.20	2025-07-29 11:02:51.773	107.58	2025-07-29 11:06:23.104	69.95	2025-07-29 11:08:38.497	51.32	2025-07-29 11:12:22.182	0	2025-07-30 10:10:01.096
136.90	2025-07-29 11:02:52.277	107.58	2025-07-29 11:06:23.621	69.95	2025-07-29 11:08:38.999	51.32	2025-07-29 11:12:22.738	0	2025-07-30 10:10:01.601
136.90	2025-07-29 11:02:52.779	105.45	2025-07-29 11:06:24.111	69.95	2025-07-29 11:08:39.503	51.32	2025-07-29 11:12:23.193	0	2025-07-30 10:10:02.089
136.90	2025-07-29 11:02:53.298	105.45	2025-07-29 11:06:24.597	72.85	2025-07-29 11:08:39.992	51.32	2025-07-29 11:12:23.693	0	2025-07-30 10:10:02.592
141.30	2025-07-29 11:02:53.771	105.45	2025-07-29 11:06:25.103	72.85	2025-07-29 11:08:40.496	59.72	2025-07-29 11:12:24.246	0	2025-07-30 10:10:03.095
141.30	2025-07-29 11:02:54.274	105.61	2025-07-29 11:06:25.606	72.85	2025-07-29 11:08:41.000	59.72	2025-07-29 11:12:24.700	0	2025-07-30 10:10:03.600
145.20	2025-07-29 11:02:54.777	105.61	2025-07-29 11:06:26.109	76.00	2025-07-29 11:08:41.504	59.72	2025-07-29 11:12:25.191	0	2025-07-30 10:10:04.085
145.20	2025-07-29 11:02:55.285	107.81	2025-07-29 11:06:26.630	76.00	2025-07-29 11:08:41.988	59.72	2025-07-29 11:12:25.696	0	2025-07-30 10:10:04.592
145.20	2025-07-29 11:02:55.769	107.81	2025-07-29 11:06:27.103	76.00	2025-07-29 11:08:42.493	61.42	2025-07-29 11:12:26.228	0	2025-07-30 10:10:05.095
137.80	2025-07-29 11:02:56.275	107.81	2025-07-29 11:06:27.603	82.14	2025-07-29 11:08:43.011	61.42	2025-07-29 11:12:26.686	0	2025-07-30 10:10:05.599
137.80	2025-07-29 11:02:56.779	108.54	2025-07-29 11:06:28.109	82.14	2025-07-29 11:08:43.500	61.42	2025-07-29 11:12:27.190	0	2025-07-30 10:10:06.101
137.80	2025-07-29 11:02:57.281	108.54	2025-07-29 11:06:28.643	82.14	2025-07-29 11:08:44.020	61.42	2025-07-29 11:12:27.691	0	2025-07-30 10:10:06.588
125.80	2025-07-29 11:02:57.815	105.02	2025-07-29 11:06:29.117	84.37	2025-07-29 11:08:44.493	61.42	2025-07-29 11:12:28.197	0	2025-07-30 10:10:07.091
125.80	2025-07-29 11:02:58.272	105.02	2025-07-29 11:06:29.602	84.37	2025-07-29 11:08:44.995	42.29	2025-07-29 11:12:28.715	0	2025-07-30 10:10:07.598
126.90	2025-07-29 11:02:58.774	105.02	2025-07-29 11:06:30.107	84.37	2025-07-29 11:08:45.499	42.29	2025-07-29 11:12:29.188	0	2025-07-30 10:10:08.101
126.90	2025-07-29 11:02:59.281	100.46	2025-07-29 11:06:30.610	83.18	2025-07-29 11:08:46.003	42.29	2025-07-29 11:12:29.708	0	2025-07-30 10:10:08.589
126.90	2025-07-29 11:02:59.814	100.46	2025-07-29 11:06:31.098	83.18	2025-07-29 11:08:46.508	33.69	2025-07-29 11:12:30.179	0	2025-07-30 10:10:09.091
133.60	2025-07-29 11:03:00.288	100.46	2025-07-29 11:06:31.619	83.18	2025-07-29 11:08:46.993	33.69	2025-07-29 11:12:30.683	0	2025-07-30 10:10:09.595
133.60	2025-07-29 11:03:00.774	100.38	2025-07-29 11:06:32.137	85.40	2025-07-29 11:08:47.498	33.69	2025-07-29 11:12:31.187	0	2025-07-30 10:10:10.097
133.60	2025-07-29 11:03:01.279	100.38	2025-07-29 11:06:32.624	85.40	2025-07-29 11:08:48.003	33.69	2025-07-29 11:12:31.691	0	2025-07-30 10:10:10.585
137.50	2025-07-29 11:03:01.783	100.87	2025-07-29 11:06:33.146	85.40	2025-07-29 11:08:48.488	33.69	2025-07-29 11:12:32.179	0	2025-07-30 10:10:11.092
137.50	2025-07-29 11:03:02.269	100.87	2025-07-29 11:06:33.599	84.56	2025-07-29 11:08:49.007	33.69	2025-07-29 11:12:32.697	0	2025-07-30 10:10:11.596
137.90	2025-07-29 11:03:02.791	100.87	2025-07-29 11:06:34.104	84.56	2025-07-29 11:08:49.496	33.69	2025-07-29 11:12:33.184	0	2025-07-30 10:10:12.096
136.57		104.19		76.86		48.37		0	

Tabel L.9 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 11 mm

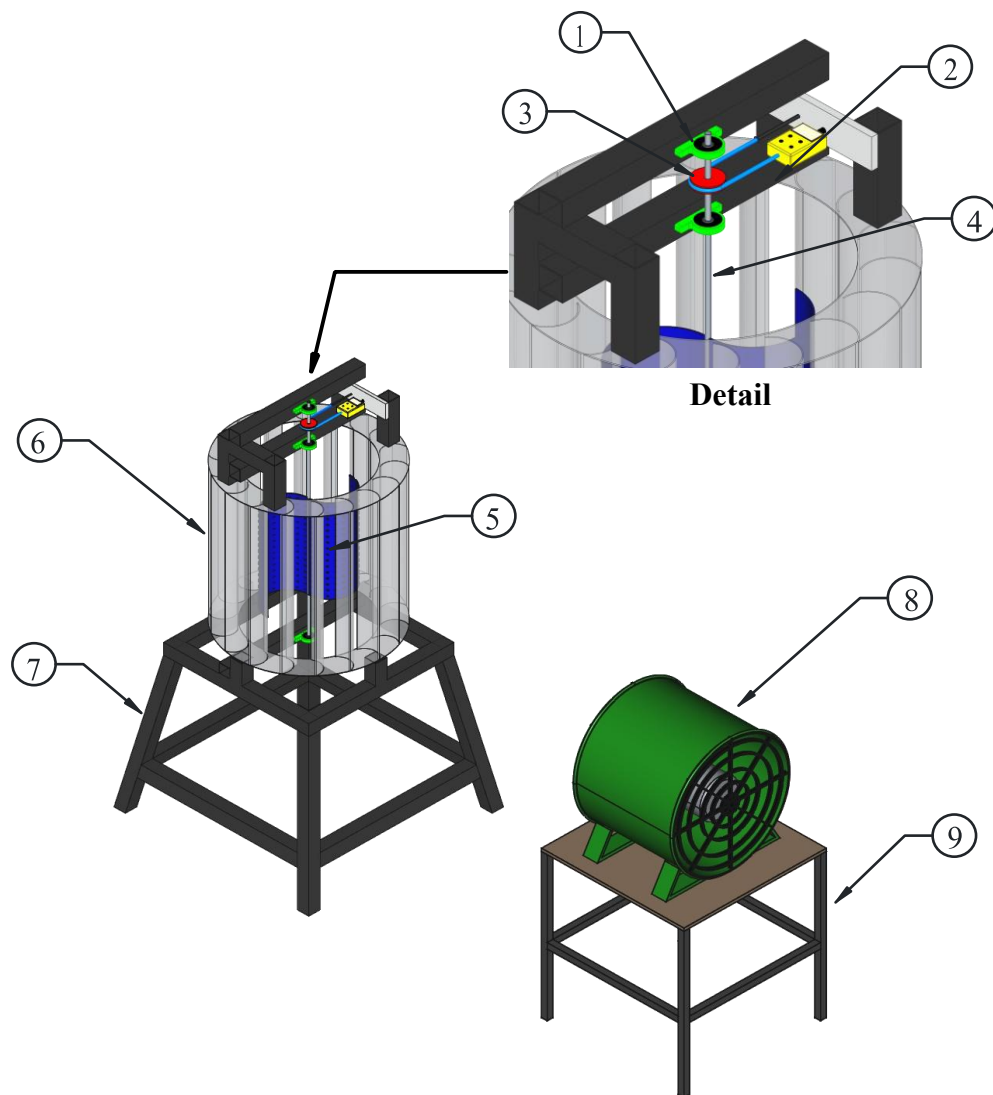
Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg		2.5 kg		3 kg	
No.	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
1	483.40	2025-07-29 14:13:37.023	427.70	2025-07-29 14:15:00.727	400.80	2025-07-29 14:16:21.844	372.60	2025-07-29 14:17:43.317	341.40	2025-07-29 14:19:11.006	288.10	2025-07-29 14:20:41.278	268.90	2025-07-29 14:22:09.370
2	478.70	2025-07-29 14:13:37.511	429.70	2025-07-29 14:15:01.234	400.80	2025-07-29 14:16:22.347	372.60	2025-07-29 14:17:43.835	337.60	2025-07-29 14:19:11.491	288.10	2025-07-29 14:20:41.782	271.70	2025-07-29 14:22:09.874
3	478.70	2025-07-29 14:13:38.017	429.70	2025-07-29 14:15:01.735	398.00	2025-07-29 14:16:22.838	371.50	2025-07-29 14:17:44.323	337.60	2025-07-29 14:19:11.994	288.10	2025-07-29 14:20:42.270	271.70	2025-07-29 14:22:10.375
4	478.40	2025-07-29 14:13:38.519	427.90	2025-07-29 14:15:02.239	398.00	2025-07-29 14:16:23.325	371.50	2025-07-29 14:17:44.826	333.40	2025-07-29 14:19:12.513	287.10	2025-07-29 14:20:42.774	270.10	2025-07-29 14:22:10.863
5	478.40	2025-07-29 14:13:39.022	427.90	2025-07-29 14:15:02.724	400.60	2025-07-29 14:16:23.829	369.80	2025-07-29 14:17:45.313	333.40	2025-07-29 14:19:13.004	287.10	2025-07-29 14:20:43.278	270.10	2025-07-29 14:22:11.368
6	480.10	2025-07-29 14:13:39.510	429.60	2025-07-29 14:15:03.230	400.60	2025-07-29 14:16:24.330	369.80	2025-07-29 14:17:45.816	331.40	2025-07-29 14:19:13.508	293.30	2025-07-29 14:20:43.797	262.90	2025-07-29 14:22:11.873
7	480.10	2025-07-29 14:13:40.016	429.60	2025-07-29 14:15:03.734	405.10	2025-07-29 14:16:24.850	368.10	2025-07-29 14:17:46.320	331.40	2025-07-29 14:19:13.994	293.30	2025-07-29 14:20:44.268	262.90	2025-07-29 14:22:12.377
8	479.50	2025-07-29 14:13:40.517	435.30	2025-07-29 14:15:04.240	405.10	2025-07-29 14:16:25.323	368.10	2025-07-29 14:17:46.826	333.20	2025-07-29 14:19:14.498	300.40	2025-07-29 14:20:44.769	255.30	2025-07-29 14:22:12.862
9	479.50	2025-07-29 14:13:41.020	435.30	2025-07-29 14:15:04.725	405.10	2025-07-29 14:16:25.827	364.60	2025-07-29 14:17:47.330	333.20	2025-07-29 14:19:15.003	300.40	2025-07-29 14:20:45.276	255.30	2025-07-29 14:22:13.366
10	477.80	2025-07-29 14:13:41.525	435.30	2025-07-29 14:15:05.231	402.80	2025-07-29 14:16:26.347	364.60	2025-07-29 14:17:47.820	331.70	2025-07-29 14:19:15.503	300.40	2025-07-29 14:20:45.780	252.50	2025-07-29 14:22:13.870
11	477.80	2025-07-29 14:13:42.012	442.00	2025-07-29 14:15:05.735	402.80	2025-07-29 14:16:26.836	364.60	2025-07-29 14:17:48.325	331.70	2025-07-29 14:19:15.994	303.80	2025-07-29 14:20:46.282	252.50	2025-07-29 14:22:14.375
12	478.70	2025-07-29 14:13:42.517	442.00	2025-07-29 14:15:06.238	397.50	2025-07-29 14:16:27.322	365.00	2025-07-29 14:17:48.823	331.70	2025-07-29 14:19:16.498	303.80	2025-07-29 14:20:46.770	252.50	2025-07-29 14:22:14.860
13	478.70	2025-07-29 14:13:43.019	447.20	2025-07-29 14:15:06.743	397.50	2025-07-29 14:16:27.827	365.00	2025-07-29 14:17:49.332	329.50	2025-07-29 14:19:17.000	303.90	2025-07-29 14:20:47.273	252.70	2025-07-29 14:22:15.366
14	480.90	2025-07-29 14:13:43.525	447.20	2025-07-29 14:15:07.230	396.60	2025-07-29 14:16:28.330	368.70	2025-07-29 14:17:49.819	329.50	2025-07-29 14:19:17.504	303.90	2025-07-29 14:20:47.778	252.70	2025-07-29 14:22:15.867
15	480.90	2025-07-29 14:13:44.010	448.10	2025-07-29 14:15:07.734	396.60	2025-07-29 14:16:28.832	368.70	2025-07-29 14:17:50.323	328.80	2025-07-29 14:19:17.994	300.00	2025-07-29 14:20:48.283	252.20	2025-07-29 14:22:16.374
16	479.80	2025-07-29 14:13:44.515	448.10	2025-07-29 14:15:08.237	398.20	2025-07-29 14:16:29.337	371.30	2025-07-29 14:17:50.826	328.80	2025-07-29 14:19:18.496	300.00	2025-07-29 14:20:48.768	252.20	2025-07-29 14:22:16.878
17	479.80	2025-07-29 14:13:45.018	448.70	2025-07-29 14:15:08.741	398.20	2025-07-29 14:16:29.823	371.30	2025-07-29 14:17:51.328	331.80	2025-07-29 14:19:19.001	300.00	2025-07-29 14:20:49.273	254.80	2025-07-29 14:22:17.366
18	478.90	2025-07-29 14:13:45.522	448.70	2025-07-29 14:15:09.226	398.20	2025-07-29 14:16:30.328	372.00	2025-07-29 14:17:51.815	331.80	2025-07-29 14:19:19.505	293.90	2025-07-29 14:20:49.778	254.80	2025-07-29 14:22:17.870
19	478.90	2025-07-29 14:13:46.024	449.70	2025-07-29 14:15:09.733	399.30	2025-07-29 14:16:30.831	372.00	2025-07-29 14:17:52.322	336.20	2025-07-29 14:19:20.008	293.90	2025-07-29 14:20:50.280	261.50	2025-07-29 14:22:18.373
20	480.50	2025-07-29 14:13:46.513	449.70	2025-07-29 14:15:10.236	399.30	2025-07-29 14:16:31.334	368.10	2025-07-29 14:17:52.824	336.20	2025-07-29 14:19:20.496	290.40	2025-07-29 14:20:50.767	261.50	2025-07-29 14:22:18.874
21	480.50	2025-07-29 14:13:47.019	448.70	2025-07-29 14:15:10.740	402.80	2025-07-29 14:16:31.825	368.10	2025-07-29 14:17:53.330	334.60	2025-07-29 14:19:20.999	290.40	2025-07-29 14:20:51.273	261.50	2025-07-29 14:22:19.365
22	482.00	2025-07-29 14:13:47.520	448.70	2025-07-29 14:15:11.227	402.80	2025-07-29 14:16:32.327	368.10	2025-07-29 14:17:53.830	334.60	2025-07-29 14:19:21.505	290.40	2025-07-29 14:20:51.777	268.90	2025-07-29 14:22:19.866
23	482.00	2025-07-29 14:13:48.022	448.70	2025-07-29 14:15:11.731	405.60	2025-07-29 14:16:32.846	362.30	2025-07-29 14:17:54.320	330.80	2025-07-29 14:19:22.005	294.00	2025-07-29 14:20:52.278	268.90	2025-07-29 14:22:20.370
24	482.00	2025-07-29 14:13:48.511	446.20	2025-07-29 14:15:12.267	405.60	2025-07-29 14:16:33.349	362.30	2025-07-29 14:17:54.824	330.80	2025-07-29 14:19:22.492	294.00	2025-07-29 14:20:52.768	272.70	2025-07-29 14:22:20.875
25	483.50	2025-07-29 14:13:49.017	446.20	2025-07-29 14:15:12.769	408.60	2025-07-29 14:16:33.839	362.00	2025-07-29 14:17:55.329	330.80	2025-07-29 14:19:22.999	298.30	2025-07-29 14:20:53.271	272.70	2025-07-29 14:22:21.362
26	483.50	2025-07-29 14:13:49.522	445.40	2025-07-29 14:15:13.242	408.60	2025-07-29 14:16:34.326	362.00	2025-07-29 14:17:55.831	328.60	2025-07-29 14:19:23.500	298.30	2025-07-29 14:20:53.771	272.70	2025-07-29 14:22:21.864
27	485.90	2025-07-29 14:13:50.025	445.40	2025-07-29 14:15:13.762	408.60	2025-07-29 14:16:34.830	362.00	2025-07-29 14:17:56.320	328.60	2025-07-29 14:19:24.006	296.10	2025-07-29 14:20:54.275	275.00	2025-07-29 14:22:22.370
28	485.90	2025-07-29 14:13:50.514	446.40	2025-07-29 14:15:14.233	410.80	2025-07-29 14:16:35.333	362.00	2025-07-29 14:17:56.821	329.80	2025-07-29 14:19:24.491	296.10	2025-07-29 14:20:54.778	275.00	2025-07-29 14:22:22.874
29	485.20	2025-07-29 14:13:51.015	446.40	2025-07-29 14:15:14.736	410.80	2025-07-29 14:16:35.837	361.50	2025-07-29 14:17:57.326	329.80	2025-07-29 14:19:24.995	296.10	2025-07-29 14:20:55.267	278.40	2025-07-29 14:22:23.394
30	485.20	2025-07-29 14:13:51.518	443.20	2025-07-29 14:15:15.257	410.50	2025-07-29 14:16:36.325	361.50	2025-07-29 14:17:57.829	333.20	2025-07-29 14:19:25.500	289.70	2025-07-29 14:20:55.771	278.40	2025-07-29 14:22:23.864
	480.84		441.49		402.53		367.06		332.40		295.44		263.77	

3,5 kg		4 kg		4,5 kg		5 kg		5,5 kg		6 kg		6,5 kg	
Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu	Putaran	Tanggal/Waktu
225.00	2025-07-29 14:24:11.094	183.98	2025-07-29 14:25:37.158	146.37	2025-07-29 14:29:12.500	127.39	2025-07-29 14:31:49.786	86.10	2025-07-29 14:33:17.511	55.58	2025-07-29 14:36:25.220	0	2025-07-29 14:41:36.310
225.00	2025-07-29 14:24:11.603	185.13	2025-07-29 14:25:37.662	148.24	2025-07-29 14:29:13.006	127.39	2025-07-29 14:31:50.273	85.01	2025-07-29 14:33:18.018	50.19	2025-07-29 14:36:25.728	0	2025-07-29 14:41:36.799
225.00	2025-07-29 14:24:12.108	185.13	2025-07-29 14:25:38.149	148.24	2025-07-29 14:29:13.555	127.39	2025-07-29 14:31:50.775	85.01	2025-07-29 14:33:18.520	50.19	2025-07-29 14:36:26.217	0	2025-07-29 14:41:37.303
218.60	2025-07-29 14:24:12.611	185.13	2025-07-29 14:25:38.652	148.24	2025-07-29 14:29:14.013	127.39	2025-07-29 14:31:51.281	85.27	2025-07-29 14:33:19.008	50.19	2025-07-29 14:36:26.719	0	2025-07-29 14:41:37.802
218.60	2025-07-29 14:24:13.096	185.91	2025-07-29 14:25:39.159	149.76	2025-07-29 14:29:14.500	125.14	2025-07-29 14:31:51.783	85.27	2025-07-29 14:33:19.513	50.19	2025-07-29 14:36:27.225	0	2025-07-29 14:41:38.307
218.60	2025-07-29 14:24:13.602	185.91	2025-07-29 14:25:39.693	149.76	2025-07-29 14:29:15.022	125.14	2025-07-29 14:31:52.273	86.73	2025-07-29 14:33:20.018	43.67	2025-07-29 14:36:27.725	0	2025-07-29 14:41:38.794
219.90	2025-07-29 14:24:14.105	185.33	2025-07-29 14:25:40.164	153.08	2025-07-29 14:29:15.505	125.14	2025-07-29 14:31:52.775	86.73	2025-07-29 14:33:20.517	43.67	2025-07-29 14:36:28.213	0	2025-07-29 14:41:39.297
219.90	2025-07-29 14:24:14.609	185.33	2025-07-29 14:25:40.652	153.08	2025-07-29 14:29:16.028	125.14	2025-07-29 14:31:53.277	88.07	2025-07-29 14:33:21.006	51.98	2025-07-29 14:36:28.733	0	2025-07-29 14:41:39.803
220.80	2025-07-29 14:24:15.095	185.33	2025-07-29 14:25:41.156	153.08	2025-07-29 14:29:16.497	122.34	2025-07-29 14:31:53.782	88.07	2025-07-29 14:33:21.510	51.98	2025-07-29 14:36:29.219	0	2025-07-29 14:41:40.304
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220.80	2025-07-29 14:24:16.119	185.85	2025-07-29 14:25:42.165	151.62	2025-07-29 14:29:17.505	122.34	2025-07-29 14:31:54.803	88.66	2025-07-29 14:33:22.520	56.29	2025-07-29 14:36:30.212	0	2025-07-29 14:41:41.307
223.70	2025-07-29 14:24:16.606	190.11	2025-07-29 14:25:42.650	151.62	2025-07-29 14:29:18.027	122.34	2025-07-29 14:31:55.276	87.23	2025-07-29 14:33:23.006	56.29	2025-07-29 14:36:30.715	0	2025-07-29 14:41:41.816
223.70	2025-07-29 14:24:17.096	190.11	2025-07-29 14:25:43.154	147.99	2025-07-29 14:29:18.496	123.87	2025-07-29 14:31:55.782	87.23	2025-07-29 14:33:23.512	54.86	2025-07-29 14:36:31.219	0	2025-07-29 14:41:42.304
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227.50	2025-07-29 14:24:21.108	192.80	2025-07-29 14:25:47.153	153.12	2025-07-29 14:29:22.513	120.63	2025-07-29 14:31:59.779	85.49	2025-07-29 14:33:27.508	55.12	2025-07-29 14:36:35.217	0	2025-07-29 14:41:46.303
227.50	2025-07-29 14:24:21.594	192.30	2025-07-29 14:25:47.657	153.12	2025-07-29 14:29:23.001	120.63	2025-07-29 14:32:00.283	85.49	2025-07-29 14:33:28.012	55.12	2025-07-29 14:36:35.721	0	2025-07-29 14:41:46.805
228.20	2025-07-29 14:24:22.098	192.30	2025-07-29 14:25:48.161	153.12	2025-07-29 14:29:23.517	120.63	2025-07-29 14:32:00.770	85.67	2025-07-29 14:33:28.517	55.12	2025-07-29 14:36:36.224	0	2025-07-29 14:41:47.292
228.20	2025-07-29 14:24:22.604	190.66	2025-07-29 14:25:48.664	150.81	2025-07-29 14:29:24.007	120.63	2025-07-29 14:32:01.289	85.67	2025-07-29 14:33:29.020	53.98	2025-07-29 14:36:36.713	0	2025-07-29 14:41:47.795
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227.30	2025-07-29 14:24:24.098	187.69	2025-07-29 14:25:50.160	147.91	2025-07-29 14:29:25.497	119.58	2025-07-29 14:32:02.767	85.45	2025-07-29 14:33:30.515	62.02	2025-07-29 14:36:38.226	0	2025-07-29 14:41:49.306
227.30	2025-07-29 14:24:24.601	187.69	2025-07-29 14:25:50.662	147.91	2025-07-29 14:29:26.005	119.58	2025-07-29 14:32:03.271	85.45	2025-07-29 14:33:31.019	61.61	2025-07-29 14:36:38.726	0	2025-07-29 14:41:49.795
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226.00	2025-07-29 14:24:25.608	186.38	2025-07-29 14:25:51.656	149.10	2025-07-29 14:29:27.013	121.50	2025-07-29 14:32:04.279	86.79	2025-07-29 14:33:32.010	61.61	2025-07-29 14:36:39.734	0	2025-07-29 14:41:50.804
224.40		189.08		150.11		122.73		86.41		54.75		0	

Tabel L.10 Data pengukuran beban dan putaran turbin angin Savonius dua sudu variasi diameter *dimple* 13 mm

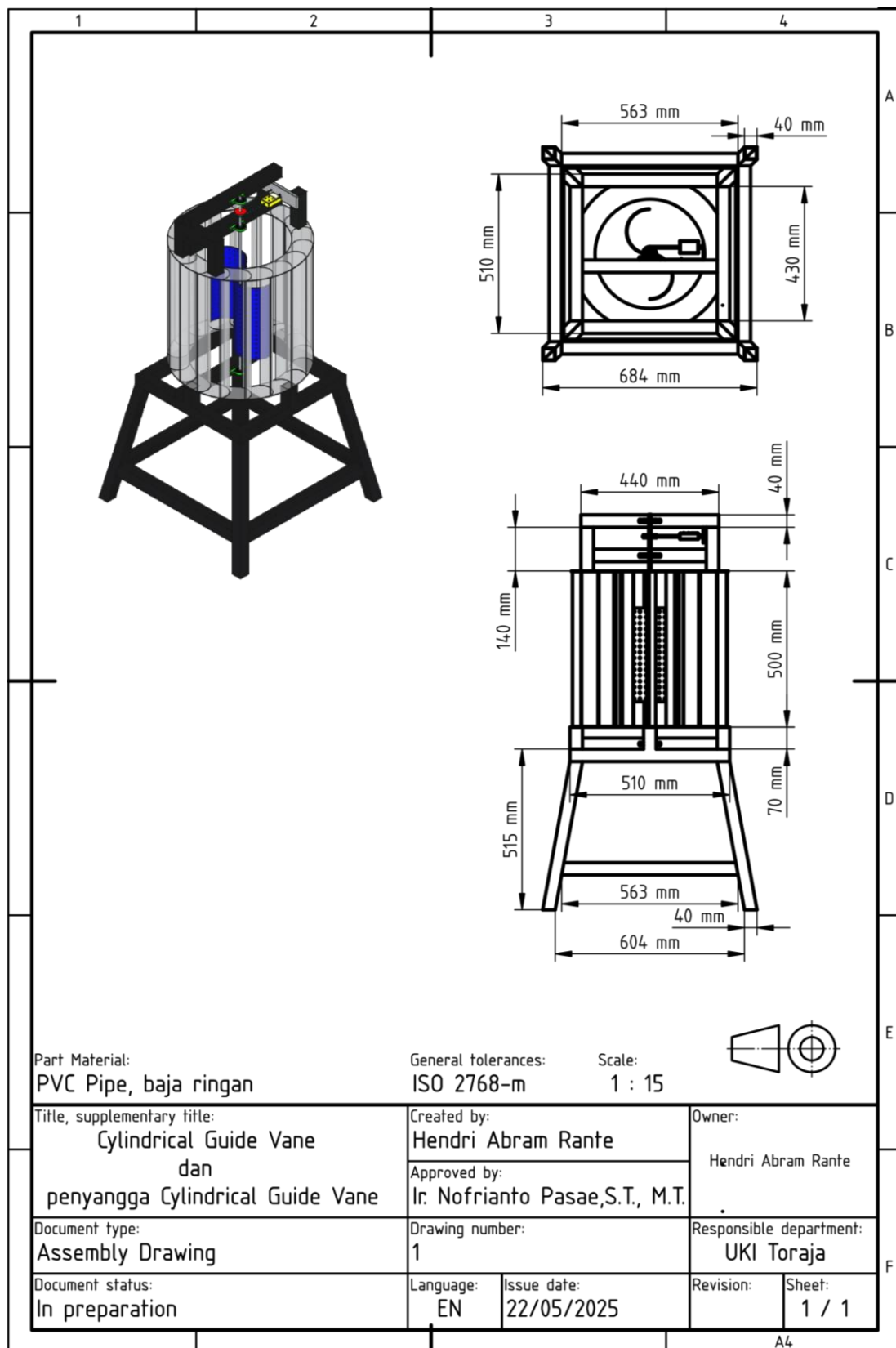
Tanpa beban			0.5 kg		1 kg		1.5 kg		2 kg		2.5 kg	
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2	468.50	2025-07-29 14:41:36.799	412.20	2025-07-29 14:45:45.047	378.60	2025-07-29 14:48:19.587	341.60	2025-07-29 14:50:12.844	299.10	2025-07-29 14:51:25.772	287.00	2025-07-29 14:52:40.581
3	468.50	2025-07-29 14:41:37.303	411.50	2025-07-29 14:45:45.550	378.60	2025-07-29 14:48:20.088	343.10	2025-07-29 14:50:13.366	305.50	2025-07-29 14:51:26.276	285.00	2025-07-29 14:52:41.085
4	464.90	2025-07-29 14:41:37.802	411.50	2025-07-29 14:45:46.067	378.60	2025-07-29 14:48:20.578	343.10	2025-07-29 14:50:13.835	305.50	2025-07-29 14:51:26.776	285.00	2025-07-29 14:52:41.589
5	464.90	2025-07-29 14:41:38.307	411.50	2025-07-29 14:45:46.559	376.30	2025-07-29 14:48:21.082	346.80	2025-07-29 14:50:14.341	306.70	2025-07-29 14:51:27.265	285.00	2025-07-29 14:52:42.094
6	461.70	2025-07-29 14:41:38.794	411.30	2025-07-29 14:45:47.043	376.30	2025-07-29 14:48:21.584	346.80	2025-07-29 14:50:14.826	306.70	2025-07-29 14:51:27.768	287.90	2025-07-29 14:52:42.581
7	461.70	2025-07-29 14:41:39.297	411.30	2025-07-29 14:45:47.547	374.90	2025-07-29 14:48:22.088	352.30	2025-07-29 14:50:15.348	306.20	2025-07-29 14:51:28.274	287.90	2025-07-29 14:52:43.083
8	461.70	2025-07-29 14:41:39.803	408.80	2025-07-29 14:45:48.050	374.90	2025-07-29 14:48:22.577	352.30	2025-07-29 14:50:15.837	306.20	2025-07-29 14:51:28.778	289.60	2025-07-29 14:52:43.588
9	459.60	2025-07-29 14:41:40.304	408.80	2025-07-29 14:45:48.556	380.40	2025-07-29 14:48:23.080	352.50	2025-07-29 14:50:16.340	306.20	2025-07-29 14:51:29.282	289.60	2025-07-29 14:52:44.092
10	459.60	2025-07-29 14:41:40.792	409.20	2025-07-29 14:45:49.045	380.40	2025-07-29 14:48:23.582	352.50	2025-07-29 14:50:16.827	303.90	2025-07-29 14:51:29.784	285.80	2025-07-29 14:52:44.577
11	458.00	2025-07-29 14:41:41.307	409.20	2025-07-29 14:45:49.548	383.00	2025-07-29 14:48:24.087	351.80	2025-07-29 14:50:17.348	303.90	2025-07-29 14:51:30.303	285.80	2025-07-29 14:52:45.082
12	458.00	2025-07-29 14:41:41.816	412.10	2025-07-29 14:45:50.052	383.00	2025-07-29 14:48:24.574	351.80	2025-07-29 14:50:17.836	304.80	2025-07-29 14:51:30.775	280.90	2025-07-29 14:52:45.601
13	458.80	2025-07-29 14:41:42.304	412.10	2025-07-29 14:45:50.553	382.10	2025-07-29 14:48:25.079	353.80	2025-07-29 14:50:18.436	304.80	2025-07-29 14:51:31.281	280.90	2025-07-29 14:52:46.089
14	458.80	2025-07-29 14:41:42.808	416.70	2025-07-29 14:45:51.041	382.10	2025-07-29 14:48:25.581	353.80	2025-07-29 14:50:18.841	315.20	2025-07-29 14:51:31.769	279.70	2025-07-29 14:52:46.577
15	458.70	2025-07-29 14:41:43.295	416.70	2025-07-29 14:45:51.543	382.10	2025-07-29 14:48:26.087	351.20	2025-07-29 14:50:19.328	315.20	2025-07-29 14:51:32.287	279.70	2025-07-29 14:52:47.081
16	458.70	2025-07-29 14:41:43.799	416.70	2025-07-29 14:45:52.048	381.60	2025-07-29 14:48:26.576	351.20	2025-07-29 14:50:19.834	326.40	2025-07-29 14:51:32.790	275.90	2025-07-29 14:52:47.586
17	459.20	2025-07-29 14:41:44.333	422.70	2025-07-29 14:45:52.553	381.60	2025-07-29 14:48:27.079	347.10	2025-07-29 14:50:20.339	326.40	2025-07-29 14:51:33.261	275.90	2025-07-29 14:52:48.092
18	459.20	2025-07-29 14:41:44.838	422.70	2025-07-29 14:45:53.056	381.90	2025-07-29 14:48:27.595	347.10	2025-07-29 14:50:20.842	326.40	2025-07-29 14:51:33.766	269.10	2025-07-29 14:52:48.594
19	459.20	2025-07-29 14:41:45.375	428.70	2025-07-29 14:45:53.545	381.90	2025-07-29 14:48:28.084	347.10	2025-07-29 14:50:21.346	329.00	2025-07-29 14:51:34.271	269.10	2025-07-29 14:52:49.129
20	459.70	2025-07-29 14:41:45.799	428.70	2025-07-29 14:45:54.048	384.20	2025-07-29 14:48:28.604	343.90	2025-07-29 14:50:21.846	329.00	2025-07-29 14:51:34.774	269.10	2025-07-29 14:52:49.619
21	459.70	2025-07-29 14:41:46.303	432.20	2025-07-29 14:45:54.555	384.20	2025-07-29 14:48:29.074	343.90	2025-07-29 14:50:22.336	325.90	2025-07-29 14:51:35.295	266.80	2025-07-29 14:52:50.090
22	459.10	2025-07-29 14:41:46.805	432.20	2025-07-29 14:45:55.057	386.50	2025-07-29 14:48:29.580	340.80	2025-07-29 14:50:22.840	325.90	2025-07-29 14:51:35.768	266.80	2025-07-29 14:52:50.593
23	459.10	2025-07-29 14:41:47.292	433.60	2025-07-29 14:45:55.543	386.50	2025-07-29 14:48:30.085	340.80	2025-07-29 14:50:23.327	320.40	2025-07-29 14:51:36.285	266.90	2025-07-29 14:52:51.080
24	457.30	2025-07-29 14:41:47.795	433.60	2025-07-29 14:45:56.044	386.00	2025-07-29 14:48:30.585	336.50	2025-07-29 14:50:23.830	320.40	2025-07-29 14:51:36.771	266.90	2025-07-29 14:52:51.583
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26	456.80	2025-07-29 14:41:48.803	435.10	2025-07-29 14:45:57.056	386.40	2025-07-29 14:48:31.580	332.30	2025-07-29 14:50:24.837	312.40	2025-07-29 14:51:37.762	265.10	2025-07-29 14:52:52.605
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28	461.20	2025-07-29 14:41:49.795	436.20	2025-07-29 14:45:58.046	386.40	2025-07-29 14:48:32.586	330.30	2025-07-29 14:50:25.844	303.40	2025-07-29 14:51:38.772	260.90	2025-07-29 14:52:53.581
29	461.20	2025-07-29 14:41:50.302	436.20	2025-07-29 14:45:58.550	387.20	2025-07-29 14:48:33.073	330.30	2025-07-29 14:50:26.334	303.40	2025-07-29 14:51:39.276	260.90	2025-07-29 14:52:54.102
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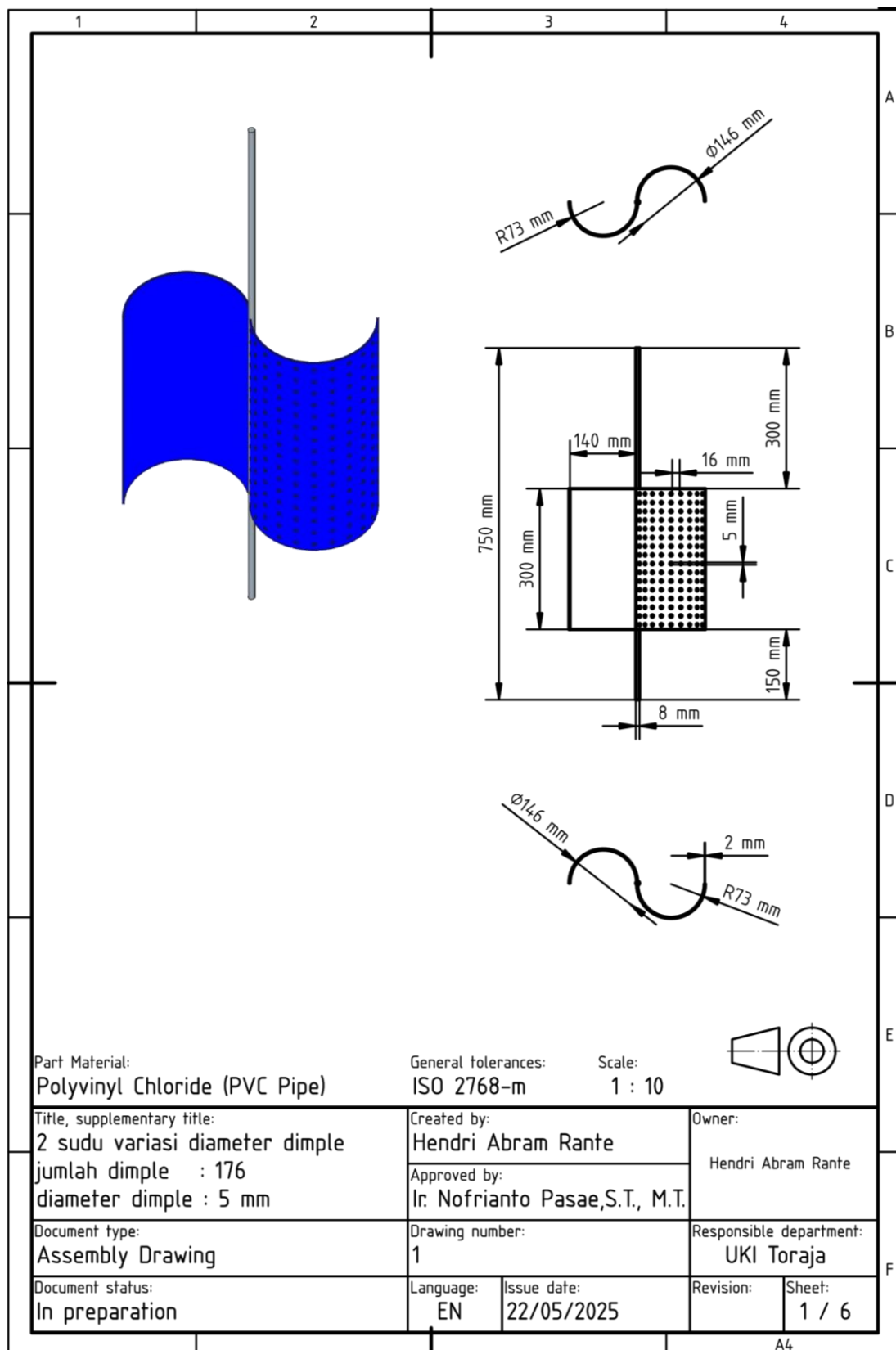
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238.10	2025-07-29 14:53:56.136	194.70	2025-07-29 14:58:27.527	149.90	2025-07-29 15:00:10.601	123.90	2025-07-29 15:02:10.698	99.00	2025-07-29 15:03:24.604	55.95	2025-07-29 15:04:47.446	0	2025-07-29 15:19:12.965
238.10	2025-07-29 14:53:56.653	194.70	2025-07-29 14:58:28.043	149.90	2025-07-29 15:00:11.121	123.90	2025-07-29 15:02:11.202	99.40	2025-07-29 15:03:25.091	55.95	2025-07-29 15:04:47.950	0	2025-07-29 15:19:13.469
239.90	2025-07-29 14:53:57.161	194.70	2025-07-29 14:58:28.533	149.90	2025-07-29 15:00:11.610	126.80	2025-07-29 15:02:11.689	99.40	2025-07-29 15:03:25.594	57.04	2025-07-29 15:04:48.453	0	2025-07-29 15:19:13.971
239.90	2025-07-29 14:53:57.646	193.90	2025-07-29 14:58:29.019	148.10	2025-07-29 15:00:12.097	126.80	2025-07-29 15:02:12.209	99.40	2025-07-29 15:03:26.097	57.04	2025-07-29 15:04:48.939	0	2025-07-29 15:19:14.460
236.40	2025-07-29 14:53:58.149	193.90	2025-07-29 14:58:29.524	148.10	2025-07-29 15:00:12.597	125.60	2025-07-29 15:02:12.697	96.80	2025-07-29 15:03:26.585	57.04	2025-07-29 15:04:49.445	0	2025-07-29 15:19:14.964
236.40	2025-07-29 14:53:58.667	191.30	2025-07-29 14:58:30.060	148.10	2025-07-29 15:00:13.103	125.60	2025-07-29 15:02:13.199	96.80	2025-07-29 15:03:27.090	57.04	2025-07-29 15:04:49.962	0	2025-07-29 15:19:15.469
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234.30	2025-07-29 14:54:00.146	191.80	2025-07-29 14:58:31.523	147.70	2025-07-29 15:00:14.596	121.80	2025-07-29 15:02:14.693	93.70	2025-07-29 15:03:28.584	58.05	2025-07-29 15:04:51.445	0	2025-07-29 15:19:16.963
234.70	2025-07-29 14:54:00.636	191.80	2025-07-29 14:58:32.060	151.60	2025-07-29 15:00:15.102	121.80	2025-07-29 15:02:15.197	87.72	2025-07-29 15:03:29.102	58.05	2025-07-29 15:04:51.948	0	2025-07-29 15:19:17.465
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237.10	2025-07-29 14:54:03.137	198.40	2025-07-29 14:58:34.545	152.40	2025-07-29 15:00:17.619	122.00	2025-07-29 15:02:17.702	82.84	2025-07-29 15:03:31.591	54.80	2025-07-29 15:04:54.450	0	2025-07-29 15:19:19.970
236.70	2025-07-29 14:54:03.643	200.70	2025-07-29 14:58:35.049	152.40	2025-07-29 15:00:18.106	122.00	2025-07-29 15:02:18.190	82.84	2025-07-29 15:03:32.093	54.80	2025-07-29 15:04:54.955	0	2025-07-29 15:19:20.472
236.70	2025-07-29 14:54:04.146	200.70	2025-07-29 14:58:35.521	152.40	2025-07-29 15:00:18.595	120.20	2025-07-29 15:02:18.693	82.84	2025-07-29 15:03:32.599	55.86	2025-07-29 15:04:55.440	0	2025-07-29 15:19:20.960
235.00	2025-07-29 14:54:04.732	201.70	2025-07-29 14:58:36.040	155.10	2025-07-29 15:00:19.099	120.20	2025-07-29 15:02:19.195	81.65	2025-07-29 15:03:33.083	55.86	2025-07-29 15:04:55.946	0	2025-07-29 15:19:21.465
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233.40	2025-07-29 14:54:05.641	200.80	2025-07-29 14:58:37.029	155.10	2025-07-29 15:00:20.105	117.30	2025-07-29 15:02:20.187	82.90	2025-07-29 15:03:34.094	55.86	2025-07-29 15:04:56.953	0	2025-07-29 15:19:22.472
233.40	2025-07-29 14:54:06.145	200.80	2025-07-29 14:58:37.536	157.20	2025-07-29 15:00:20.595	117.30	2025-07-29 15:02:20.690	82.90	2025-07-29 15:03:34.597	58.09	2025-07-29 15:04:57.441	0	2025-07-29 15:19:22.960
233.40	2025-07-29 14:54:06.663	200.80	2025-07-29 14:58:38.020	157.20	2025-07-29 15:00:21.096	115.10	2025-07-29 15:02:21.196	82.90	2025-07-29 15:03:35.082	58.09	2025-07-29 15:04:57.942	0	2025-07-29 15:19:23.460
233.40	2025-07-29 14:54:07.135	195.20	2025-07-29 14:58:38.525	157.20	2025-07-29 15:00:21.603	115.10	2025-07-29 15:02:21.697	86.49	2025-07-29 15:03:35.587	58.09	2025-07-29 15:04:58.448	0	2025-07-29 15:19:23.967
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236.20	2025-07-29 14:54:08.144	189.80	2025-07-29 14:58:39.535	155.30	2025-07-29 15:00:22.592	110.70	2025-07-29 15:02:22.689	86.49	2025-07-29 15:03:36.597	59.29	2025-07-29 15:04:59.457	0	2025-07-29 15:19:24.976
236.50	2025-07-29 14:54:08.647	189.80	2025-07-29 14:58:40.019	151.60	2025-07-29 15:00:23.096	108.60	2025-07-29 15:02:23.195	84.60	2025-07-29 15:03:37.081	59.29	2025-07-29 15:04:59.940	0	2025-07-29 15:19:25.461
236.50	2025-07-29 14:54:09.133	189.80	2025-07-29 14:58:40.556	151.60	2025-07-29 15:00:23.599	108.60	2025-07-29 15:02:23.699	84.60	2025-07-29 15:03:37.586	59.29	2025-07-29 15:05:00.447	0	2025-07-29 15:19:25.966
235.00	2025-07-29 14:54:09.637	189.30	2025-07-29 14:58:41.079	151.60	2025-07-29 15:00:24.103	108.60	2025-07-29 15:02:24.200	84.60	2025-07-29 15:03:38.090	58.69	2025-07-29 15:05:00.950	0	2025-07-29 15:19:26.468
235.00	2025-07-29 14:54:10.141	189.30	2025-07-29 14:58:41.533	152.00	2025-07-29 15:00:24.612	109.90	2025-07-29 15:02:24.702	78.66	2025-07-29 15:03:38.596	58.69	2025-07-29 15:05:01.452	0	2025-07-29 15:19:26.975
235.88		194.88		151.66		119.23		88.21		57.10		0	

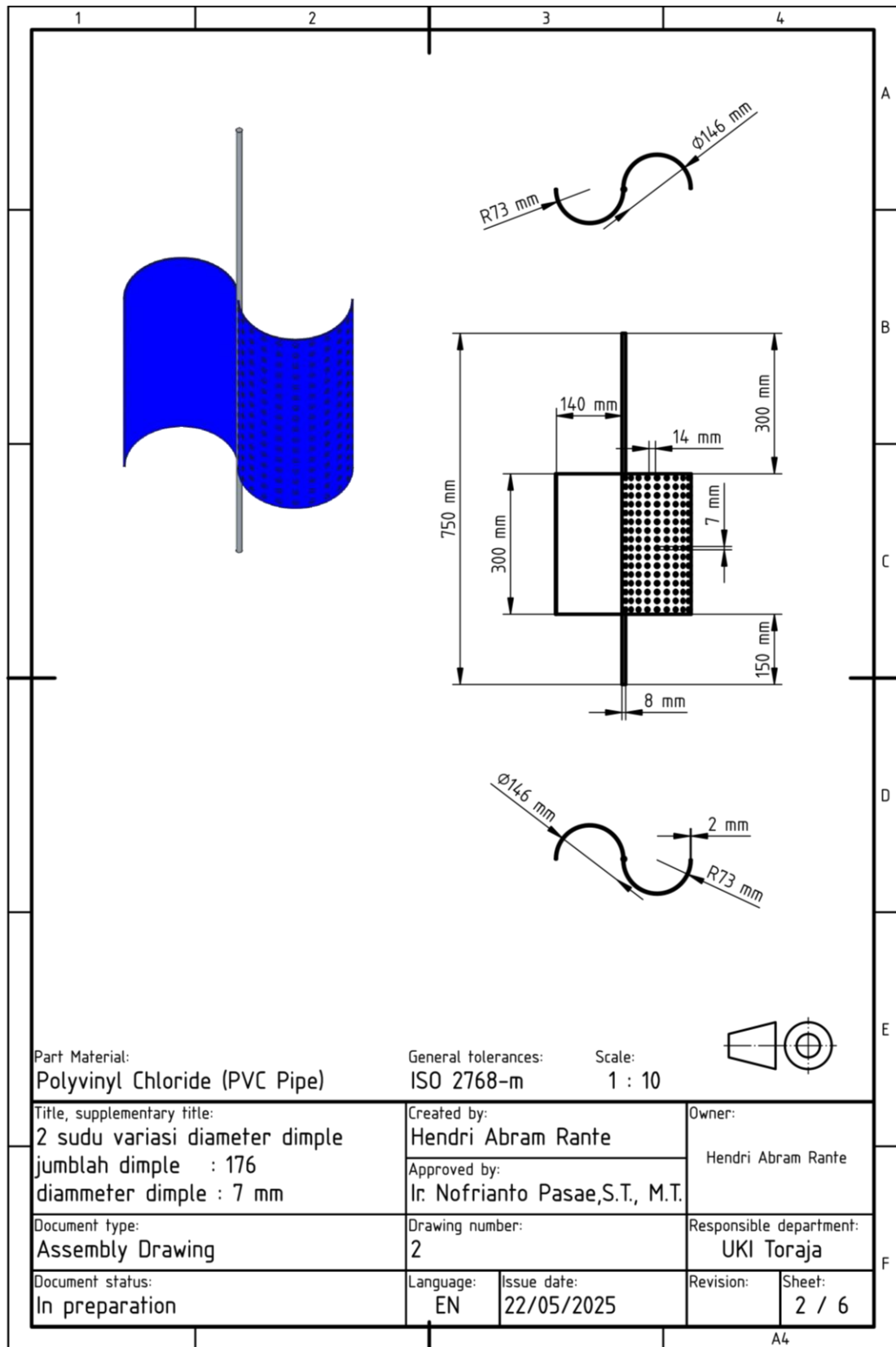


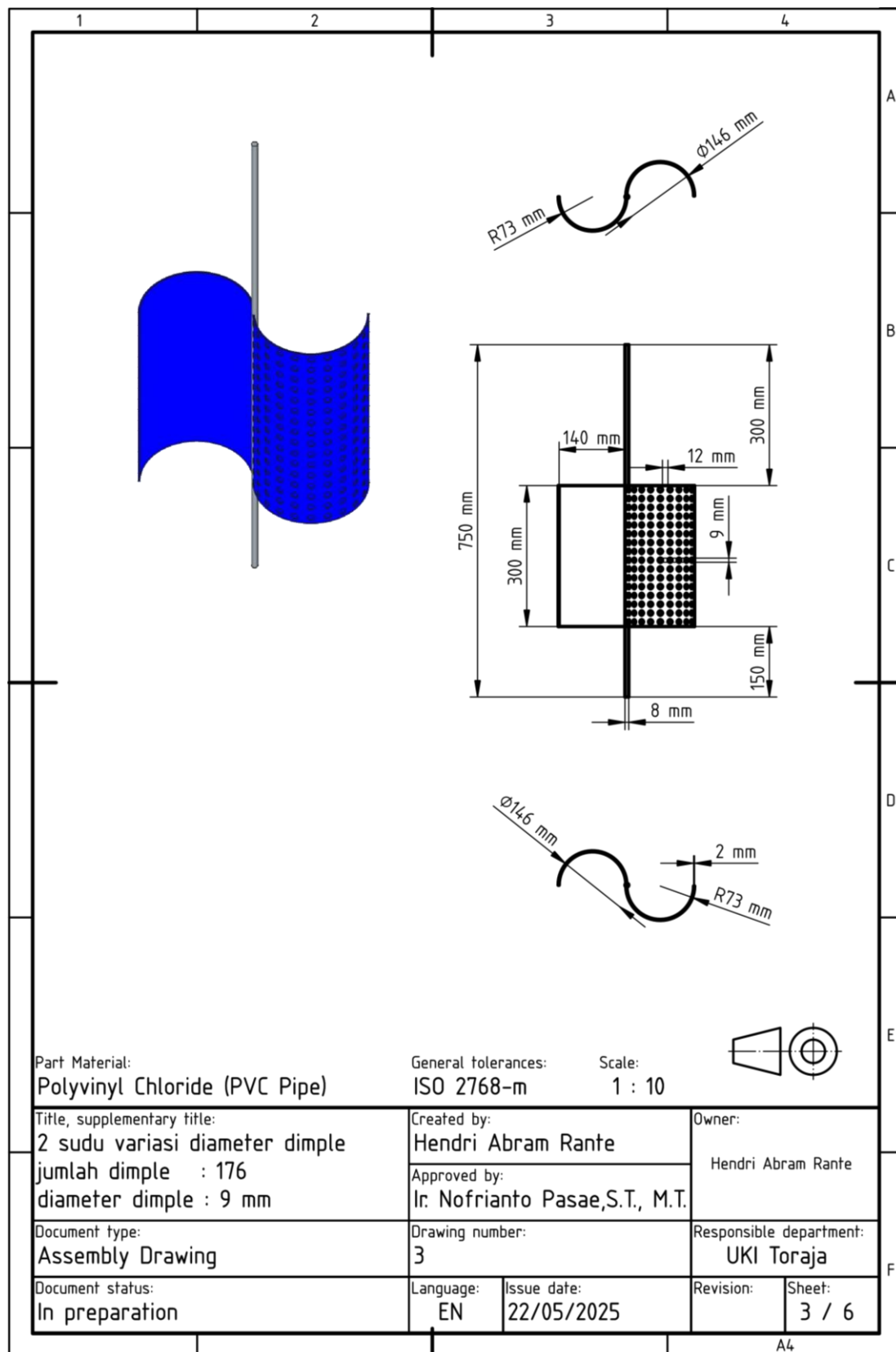
Gambar L.1 *Layout* turbin angin Savonius 2 sudu variasi diameter *dimple*

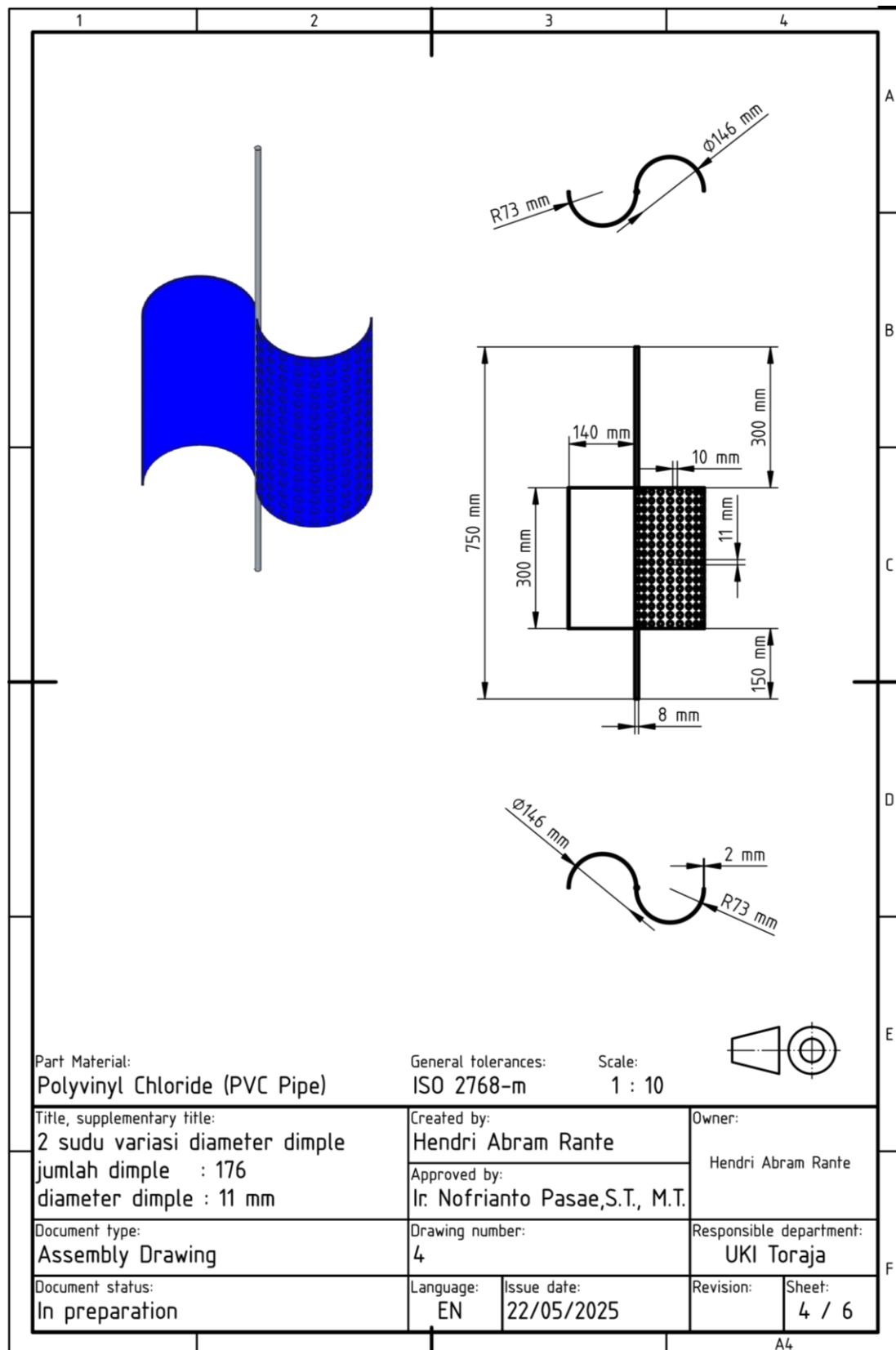
1. *Bearing*
2. *Pembebanan*
3. *Pully*
4. *Poros turbin*
5. *Sudu turbin*
6. *Cylindrical Guide Vane*
7. *Penyangga cylindrical guide vane*
8. *Blower*
9. *Rangka blower*

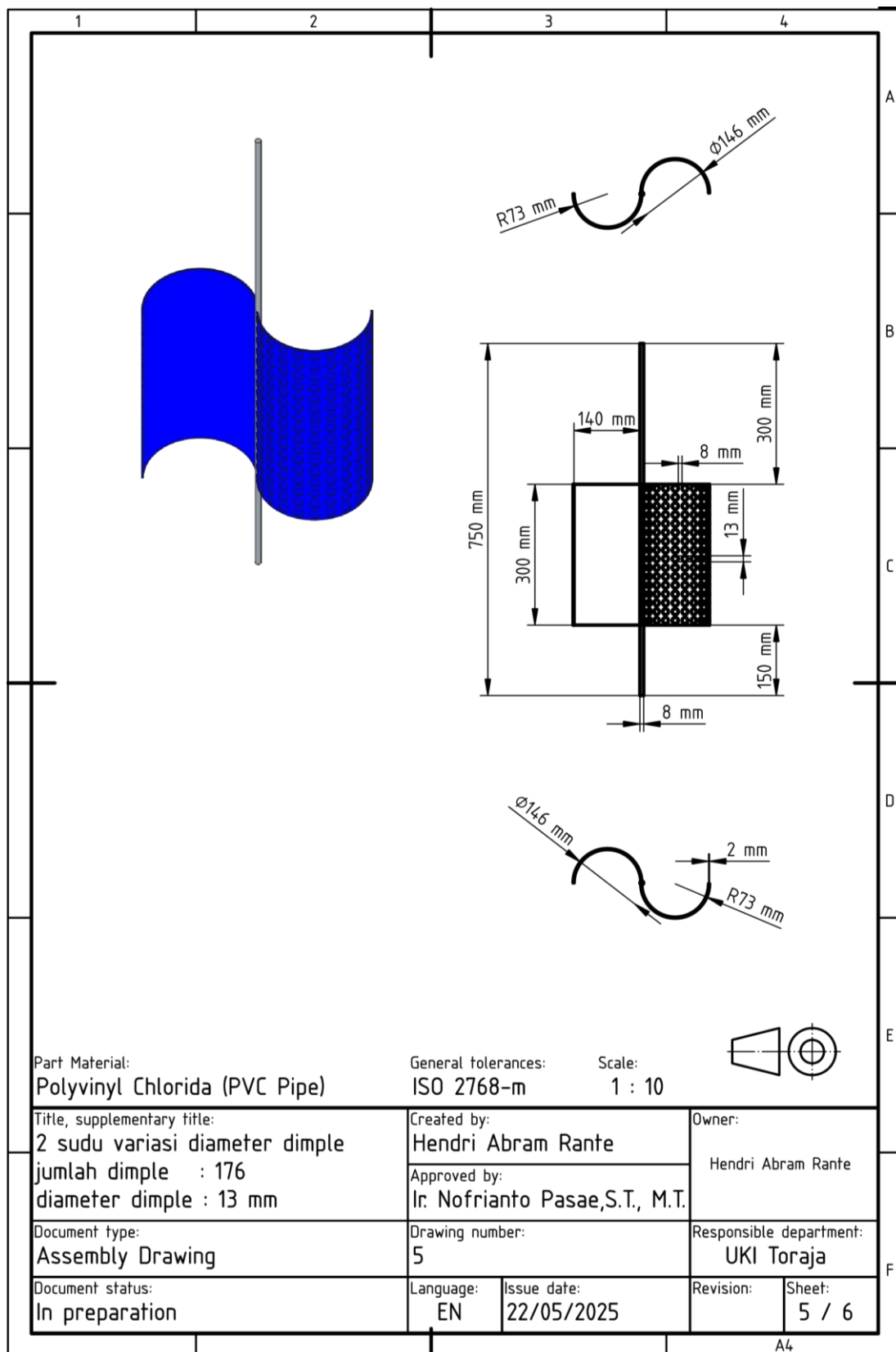
Gambar L.2 Rangka *cylindrical guide vane*

Gambar L.3 Dua sudu diameter *dimple* 5 mm

Gambar L.4 Dua sudu diameter *dimple* 7 mm

Gambar L.5 Dua sudu diameter *dimple* 9 mm

Gambar L.6 Dua sudu diameter *dimple* 11 mm

Gambar L.7 Dua sudu diameter *dimple* 13 mm



Gambar L.8 Proses Pemotongan Poros



Gambar L.9 Proses Pemotongan Pipa PVC



Gambar L.10 Proses Pemanasan Pipa PVC



Gambar L.11 Proses Pencetakan Sudu



Gambar L.12 Proses Pembentukan Sudu Menggunakan *Heat Gun*



Gambar L.13 Proses Pembuatan *Dimple*



Gambar L.14 Proses Pemasangan Sudu



Gambar L.15 Proses Pengecatan Rotor



Gambar L.16 Proses Pembuatan *Cylindrical Guide Vane*



Gambar L.17 Proses Pemotongan Besi Dudukan *cylindrical Guide Vane*



Gambar L.18 Proses Pengelasan Dudukan *Cylindrical Guide Vane*



Gambar L.19 Proses Pengambilan Data



Gambar L.20 Proses Pengukuran Kecepatan Angin Menggunakan Anemometer Data Logger



Gambar L.21 Proses Pengukuran Pembebanan Menggunakan Torsi Meter



Gambar L.22 Proses Pengukuran Kecepatan Putaran Dengan *Tachometer*



Gambar L.23 Turbin Angin Savonius Dua Sudu Variasi Diameter *Dimple*



Tampak Depan



Tampak Samping



Tampak Belakang

Gambar L.24 *Blower*



Gambar L.25 Turbin Angin Savonius Dua Sudu Variasi Diameter *Dimple*

Matriks Jurnal Rujukan

No	Author/ Tahun	Publisher	Judul	Tujuan	Metode	Hasil
1	Nofrianto Pasae <i>et al</i> ,, 2025	<i>Journal Of Social Science Research</i> Volume 5 Nomor 1 Tahun 2025 Page 5493- 5503 E-ISSN 2807-4238 and P-ISSN 2807- 4246	Unjuk Kerja Turbin Angin Savonius Tiga Sudu Model <i>Twist</i> Dengan Variasi Sudut Puntir Sudu	Penelitian ini bertujuan untuk mengetahui pengaruh sudut puntir sudu terhadap torsi, daya, dan efisiensi turbin angin Savonius tiga sudu tipe <i>twist</i> ,	Metode yang digunakan dalam penelitian ini adalah metode eksperimen dengan melakukan pengujian terhadap turbin angin Savonius tiga sudu tipe <i>twist</i> dengan variasi sudut puntir sudu dengan dimensi diameter 250 mm dan tinggi 350 mm, Pada penelitian ini dilakukan variasi sudut puntir sudu yaitu 120°, 150°, dan 180°, Torsi maksimum yang dihasilkan sudut puntir 180° sebesar 2,94 Nm dengan beban 15 kg dan putaran 0 r, Daya maksimum yang dihasilkan sudut puntir 180° sebesar 8,16 Watt dengan beban 7	Berdasarkan data hasil pengujian dan perhitungan pada turbin angin Savonius tiga sudu model <i>twist</i> dengan variasi sudut puntir 120°, 150°, dan 180° maka dapat disimpulkan bahwa torsi maksimum yang dihasilkan adalah sebesar 2,94 Nm terjadi pada sudut puntir 180° dengan beban 15 kg dan putaran 0 r, daya maksimum yang dihasilkan adalah sebesar 8,19 Watt terjadi pada sudut puntir 180°

					kg dan putaran 57,00 r, Efisiensi maksimum yang	dengan beban 7 kg dan putaran 57,0,
No	<i>Author/ Tahun</i>	<i>Publisher</i>	Judul	Tujuan	Metode	Hasil
					dihaskan sudut puntir 180° sebesar 15,38 % dengan putaran 57,00 r dan beban 7 kg,	r, dan efisiensi maksimum yang dihasilkan adalah sebesar 15,38% terjadi pada sudut puntir 180° dengan beban 7 kg dan putaran 57,0 r,
2	Cahya Irani <i>et al., 2023</i>	Jurnal Sains Terapan Vol, 9 No,1 2023 e- ISSN 2477- 5525 p-ISSN 2406-8810	Uji Performa Turbin Angin Savonius Tipe U Berdasarkan Variasi Sudut Guide Vane	Tujuan penelitian ini adalah untuk mengetahui pengaruh penambahan guide vane atau deflector terhadap performa turbin angin Savonius Tipe U sebagai upaya peningkatan kinerja turbin angin Savonius Tipe U,	Penelitian ini adalah jenis penelitian eksperimen, meliputi penambahan guide vane atau pengarah angin terdiri dari 3 variasi sudut pitch pada guide vane antara lain 30°, 60° dan 80° dengan variasi kecepatan angin menggunakan variasi jarak 150 cm, 180 cm dan 200 cm dari sumber angin kecepatan angin menggunakan variasi jarak	Hasil yang diperoleh yaitu pada variasi sudut pitch 40° rata – rata mengalami peningkatan daya turbin angin, semakin lebar sudut pitch pada guide vane, maka putaran yang dihasilkan akan semakin meningkat dan pada sudut pitch guide

					150 cm, 180 cm dan 200 cm dari sumber angin	vane tertentu akan mencapai putaran
No	<i>Author/ Tahun</i>	<i>Publisher</i>	Judul	Tujuan	Metode	Hasil
					berupa blower menuju turbin angin Savonius Tipe U dengan pengujian menggunakan generator dan tanpa generator dan dilakukan perbandingan dengan data tanpa menggunakan guide vane pada turbin angin Savonius Tipe U, Faktor – faktor yang diobservasi dan diukur yaitu kecepatan angin, daya, r (rotation per minute), torsi dan Cp (Coefficient of power),	maksimal dan pada sudut guide vane tertentu putaran akan mulai turun, pada variasi sudut pitch 80° rata – rata kecepatan turbin mengalami penurunan, hal ini disebabkan karena aliran udara yang berasal dari blower terhalang dengan sudu dari guide vane, sehingga aliran udara tidak dapat langsung mengenai blade dari turbin angin Savonius Tipe U, dan semakin lebar

						sudut pitch guide vane, maka daya dan torsi yang dihasilkan juga akan semakin
No	<i>Author/ Tahun</i>	<i>Publisher</i>	Judul	Tujuan	Metode	Hasil
						meningkat dan pada sudut guide vane tertentu akan mencapai energi yang optimum kemudian akan mengalami penurunan,
3	Andi Mulkan <i>et al.</i> , 2022	Jurnal Ilmiah Teknik UNIDA e-ISSN 2721-6861 P-ISSN 2548-7205	Analisis Pemanfaatan Energi Angin Sebagai Sumber Pembangkit Energi Listrik	Tujuan dari studi penelitian ini adalah untuk mengetahui potensi energi angin di Kota Banda Aceh serta merencanakan spesifikasi turbin angin yang sesuai berdasarkan hasil perhitungan,	Penelitian ini dilakukan mulai bulan April 2015 sampai dengan bulan Mei 2015 dengan lokasi penelitian adalah di Kota Banda Aceh dengan menghitung kecepatan angin (Knot), dan menentukan arah angin terbanyak perbulan,	Dari hasil perhitungan dan pembahasan yang telah dilakukan, dapat ditarik beberapa kesimpulan yaitu Untuk diameter rotor 8 meter, daya output yang paling

						besar pada Bulan Agustus yaitu 18,71 kW dan yang terendah pada Bulan Februari yaitu 0,95 kW, Daya output rata-
No	<i>Author/ Tahun</i>	<i>Publisher</i>	Judul	Tujuan	Metode	Hasil
						rata adalah 7,18 kW dengan kecepatan angin rata-rata pada tahun 2014 adalah 9,39 m/s, Sedangkan untuk diameter rotor 6 meter, daya output tertinggi terlihat pada Bulan Agustus yaitu 10,53 kW dan yang terendah pada Bulan Februari yaitu 0,53 kW, Kecepatan angin dan luas area sapuan rotor (rotor

						swept area) berpengaruh kepada daya output yang dihasilkan,
4	Iqsyah <i>et al.</i> , 2018	Jurnal Ilmiah Prodi Teknik Elektro Fakultas	Perancangan Pembangkit Listrik Kincir Angin	Penelitian bertujuan untuk mengkaji cara kerja pembangkit listrik tenaga kincir	Metode yang digunakan antara lain studi literatur yaitu mencari buku, modul yang berkaitan	Hasil yang diperoleh yaitu hasil pengukuran tegangan
No	<i>Author/ Tahun</i>	<i>Publisher</i>	Judul	Tujuan	Metode	Hasil
		Teknik Unismuh Makassar E-ISSN 2477-5525 p-ISSN 2406-8810	Menggunakan Empat Sumbu Horizontal	angin sehingga menghasilkan listrik,	dengan judul penelitian, pengumpulan alat dan bahan, perancangan, pengujian alat dan pengambilan data,	penggunaan jumlah turbin, dan hasil pengukuran sampai di output step up pada saat diberi baterai (penyimpanan) dan beban lampu,