



MECWIN GREEN PROPULSION PVT LTD DYNO TEST REPORT

FORMAT NO	FM/QA/020
REV NO	0
DATE	14-01-2024
DATE	25-03-2024

SERIAL NO	-	CUSTOMER NAME	-
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Product Features

Application : - 2-Wheeler

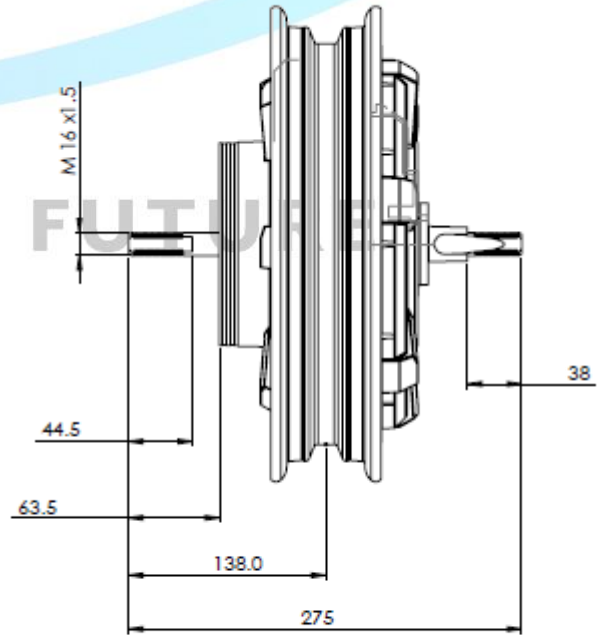
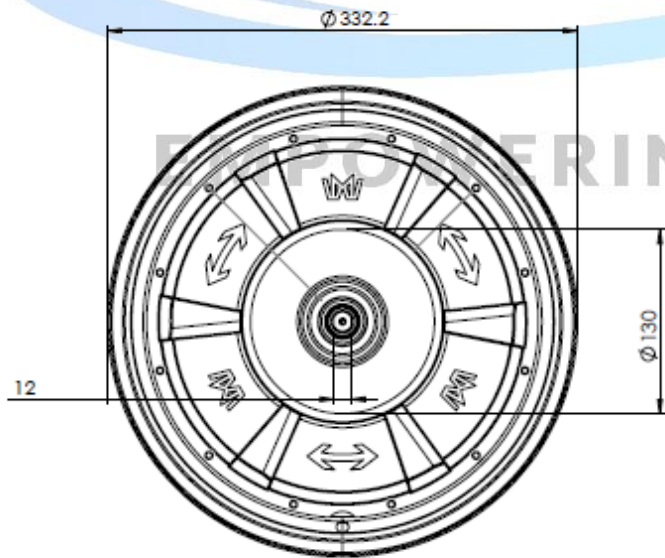
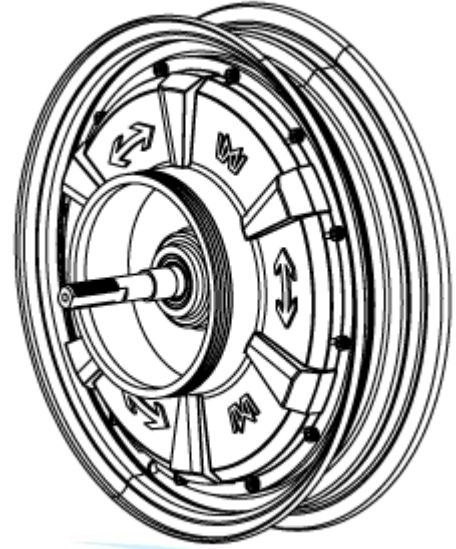
Motor Type :- Hub motor

Motor Specifications

Outer Diameter :- 461mm

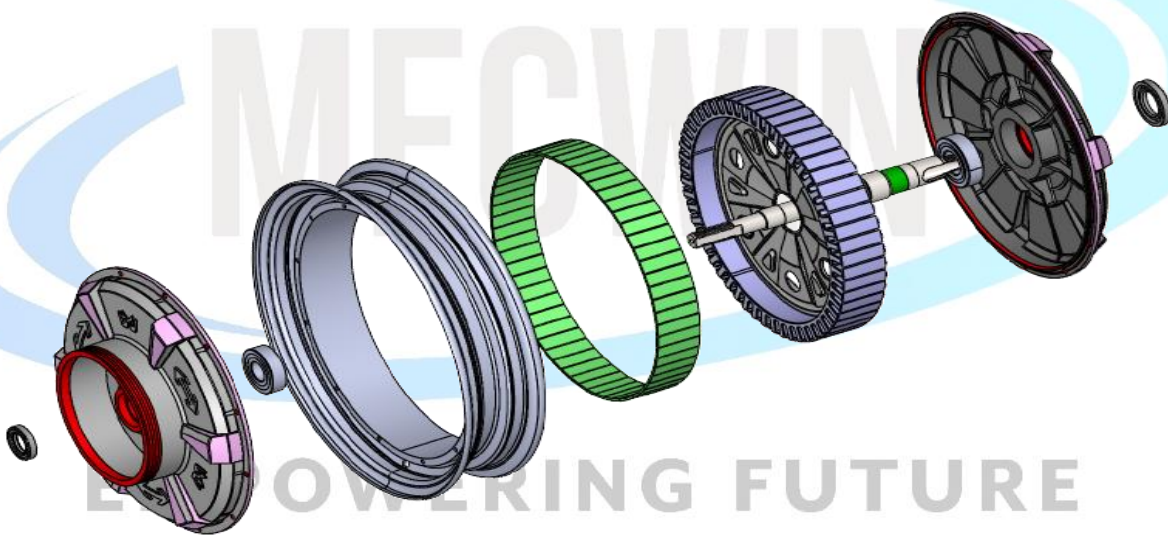
Shaft Length :- 275mm

Brake Size :- 130 drum Brake



Motor Specification

Operating Voltage	48 V
Rated Power	250 W
Peak Power	1 kW
Rated Torque	5 N-m
Peak Torque	75 N-m
Max DC Current	25 A
Max Speed	401 Rpm



Performance Details

Parameters	DC Voltage	DC Current	RMS Line to Line Voltage	RMS Line Current	Input Power	Torque	Speed	Output power	System Efficiency
	V	A	V	A	W	N-m	rpm	W	%
No Load	48	2.4	36	8	115	0.56	401	23.6	20.45
Max Torque	48	24.38	11	40	1170	75.4	48.29	379.9	32
Max Input Power	48	24.97	29.5	21	1198.4	35.4	267	990	82.6
Max Output Power	48	24.88	18	33	1194.4	30.4	324.5	1020	85.4
Max Efficiency	48	24.88	18	33	1194.4	30.4	324.5	1020	85.4



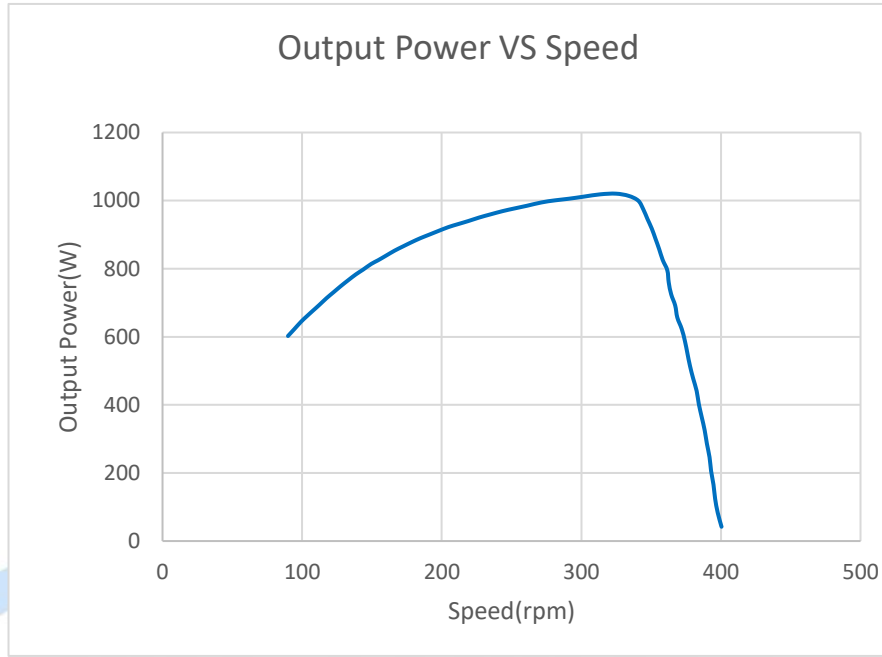
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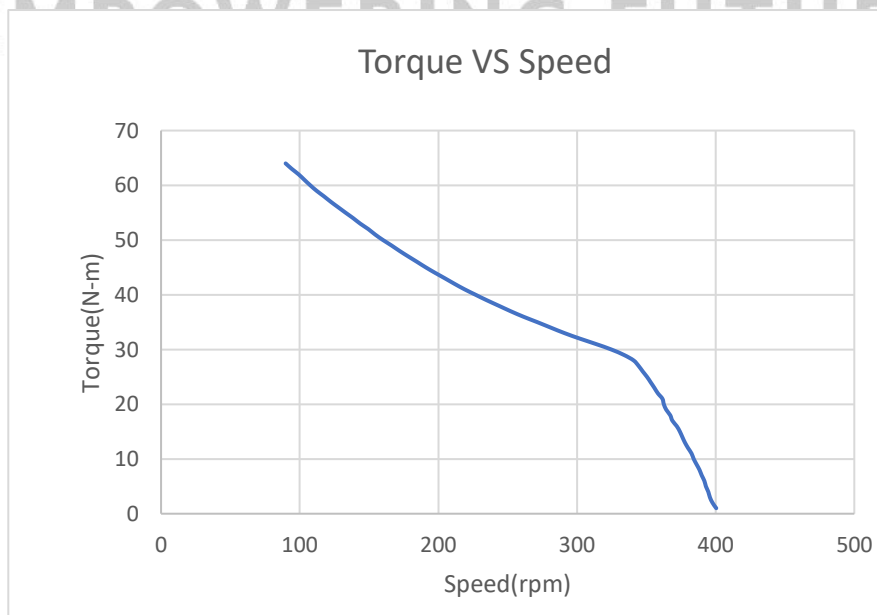
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Performance Curves

Output Power vs Speed



Torque vs Speed



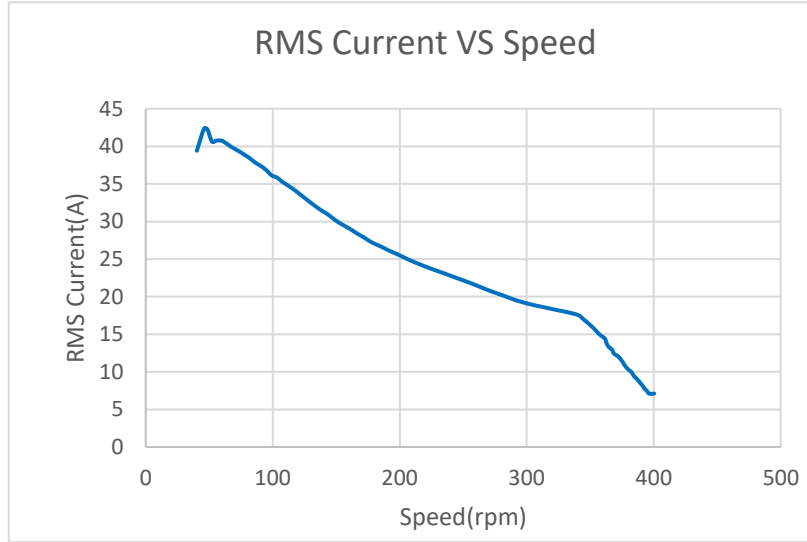


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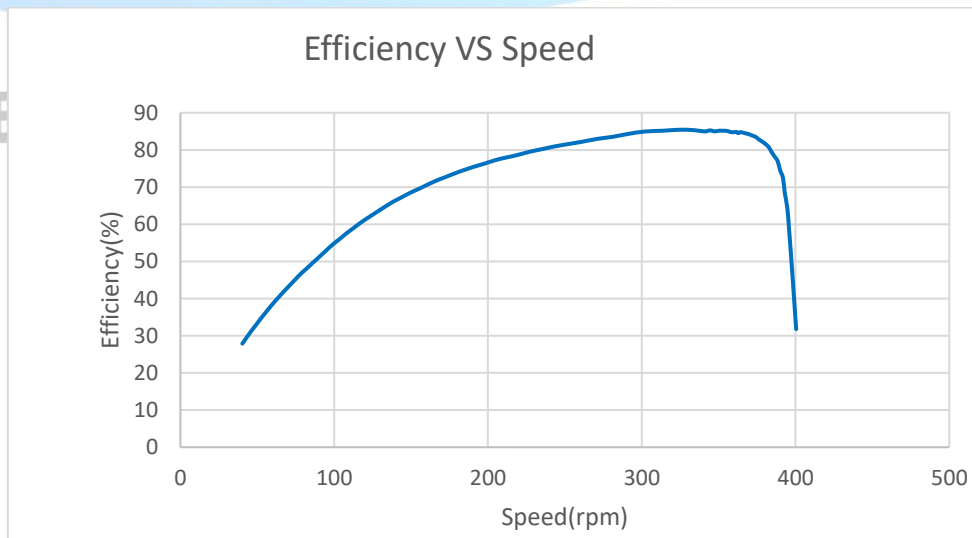
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Current vs Speed



Efficiency vs Speed





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Load Test report:

S.No	Torque(N m)	Speed(RPM)	AC_Curr_P H1 (Arms)	DC_Voltage(V)	DC_Current(A)	Input Power(W)	Motor Output Power(W)	System Efficiency(%)
1	1	400.43	7.11	48	2.75	131.99	41.96	31.79
2	2	397.7	7.08	48	3.61	173.51	83.38	48.05
3	3	395.85	7.16	48	4.43	212.86	124.36	58.42
4	4	394.68	7.48	48	5.36	257.15	165.43	64.33
5	5	392.96	7.72	48	6.25	300	205.65	68.55
6	6	391.85	8.03	48	7.08	339.68	246.1	72.45
7	7	389.95	8.41	48	7.99	383.28	285.89	74.59
8	8	388.35	8.75	48	8.8	422.46	325.43	77.03
9	9	386.25	9.15	48	9.69	464.98	364.09	78.3
10	10	384.17	9.49	48	10.53	505.3	402.29	79.61
11	11	382.61	9.95	48	11.38	546	440.92	80.75
12	12	380.09	10.3	48	12.18	584.64	477.74	81.72
13	13	377.84	10.71	48	13.01	624.46	514.38	82.37
14	14	375.98	11.2	48	13.86	665.26	551.38	82.88
15	15	374.2	11.63	48	14.67	704.15	587.73	83.47
16	16	371.92	12.07	48	15.48	742.87	623.06	83.87
17	17	368.77	12.42	48	16.21	778.29	656.51	84.35
18	18	367.21	12.93	48	17.07	819.36	692.17	84.48
19	19	364.35	13.36	48	17.82	855.15	724.98	84.78
20	20	362.62	13.93	48	18.72	898.59	759.6	84.53
21	21	361.6	14.42	48	19.53	937.5	795.22	84.82
22	22	358.3	14.84	48	20.29	974.03	825.6	84.76
23	23	355.79	15.24	48	20.98	1007.17	857.02	85.09
24	24	353.16	15.72	48	21.71	1042.31	887.53	85.15
25	25	350.49	16.16	48	22.44	1077.24	917.54	85.17
26	26	347.38	16.62	48	23.19	1112.92	945.98	85
27	27	344.44	17.04	48	23.8	1142.54	973.96	85.25
28	28	340.85	17.53	48	24.5	1176.19	999.58	84.98
29	29	333.91	17.86	48	24.76	1188.34	1013.93	85.32
30	30	324.77	18.19	48	24.88	1194.4	1020.39	85.43
31	31	313.71	18.59	48	24.92	1196.04	1018.52	85.16
32	32	301.93	19.03	48	24.81	1191	1011.79	84.95
33	33	290.93	19.56	48	24.85	1192.83	1005.43	84.29
34	34	281.07	20.18	48	24.96	1198.31	1000.77	83.52
35	35	271.34	20.76	48	24.97	1198.43	994.59	82.99
36	36	261.28	21.44	48	24.97	1198.44	985.09	82.2
37	37	252.12	22.04	48	24.95	1197.68	976.99	81.57
38	38	243.54	22.56	48	24.94	1197.07	969.08	80.95
39	39	234.93	23.11	48	24.93	1196.55	959.57	80.19
40	40	226.85	23.59	48	24.91	1195.61	950.32	79.48



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41	41	218.88	24.1	48	24.91	1195.64	939.75	78.6
42	42	211.66	24.59	48	24.88	1194.38	930.95	77.94
43	43	204.77	25.11	48	24.87	1193.9	922.19	77.24
44	44	197.73	25.68	48	24.87	1193.78	911.02	76.31
45	45	190.97	26.18	48	24.84	1192.15	899.88	75.48
46	46	184.7	26.72	48	24.83	1192.04	889.64	74.63
47	47	178.32	27.19	48	24.82	1191.4	877.64	73.67
48	48	172.09	27.85	48	24.81	1190.72	865.06	72.65
49	49	166.27	28.43	48	24.78	1189.57	853.08	71.71
50	50	160.09	29.09	48	24.76	1188.61	838.28	70.53
51	51	154.43	29.63	48	24.76	1188.54	824.82	69.4
52	52	149.47	30.15	48	24.77	1188.75	813.95	68.47
53	53	143.64	30.92	48	24.71	1186.26	797.22	67.2
54	54	138.56	31.45	48	24.69	1185.23	783.53	66.11
55	55	133.06	32.11	48	24.67	1184.09	766.35	64.72
56	56	127.71	32.8	48	24.65	1183.33	748.95	63.29
57	57	122.36	33.51	48	24.6	1180.87	730.4	61.85
58	58	117.42	34.16	48	24.57	1179.28	713.2	60.48
59	59	112.19	34.78	48	24.54	1177.77	693.18	58.86
60	60	107.62	35.28	48	24.54	1177.74	676.21	57.42
61	61	103.39	35.85	48	24.58	1179.79	660.45	55.98
62	62	99.22	36.13	48	24.58	1179.65	644.19	54.61
63	63	94.29	36.94	48	24.56	1179.07	622.05	52.76
64	64	89.85	37.46	48	24.58	1179.8	602.25	51.05
65	65	85.92	37.88	48	24.59	1180.11	584.86	49.56
66	66	82.02	38.41	48	24.57	1179.45	566.87	48.06
67	67	78.51	38.8	48	24.54	1177.85	550.88	46.77
68	68	74.46	39.24	48	24.53	1177.5	530.2	45.03
69	69	70.52	39.63	48	24.51	1176.29	509.52	43.32
70	70	67	39.97	48	24.48	1175.14	491.12	41.79
71	71	63.11	40.43	48	24.43	1172.82	469.23	40.01
72	72	59.69	40.76	48	24.42	1171.96	450.06	38.4
73	73	55.6	40.76	48	24.37	1169.7	425.01	36.33
74	74	52.14	40.64	48	24.36	1169.29	404.07	34.56
75	75	48.49	42.28	48	24.38	1170.32	380.83	32.54
76	75.92	45.87	42.35	48	24.4	1170.99	364.71	31.15
77	72.04	40.28	39.42	47.99	22.71	1090.02	303.88	27.88