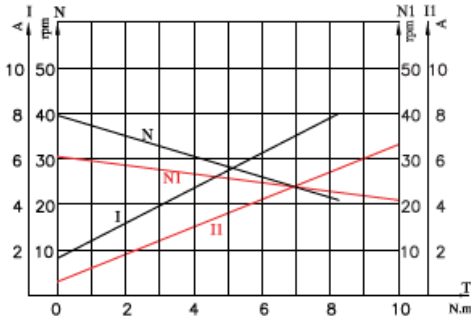
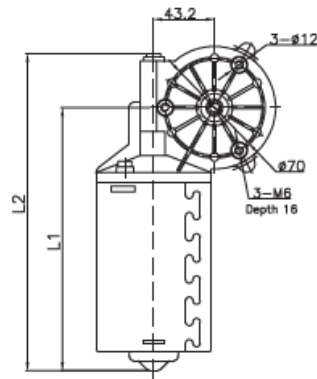
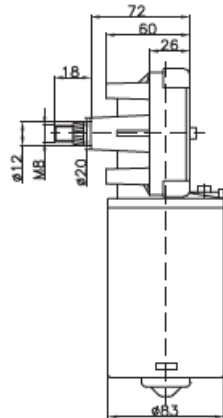


# Wiper Motor -WD1160/1160-B

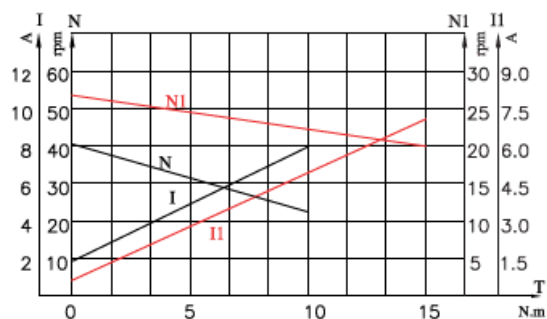


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dual Speed Design
- Dynamically Balanced Rotor

## Mechanical



WD1160  
---BLK High Speed,



WD1160-B  
---RED Low Speed

## Performance Data at Rated 12V DC

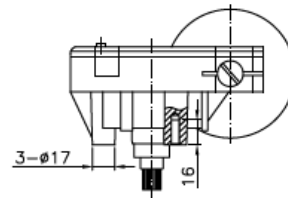
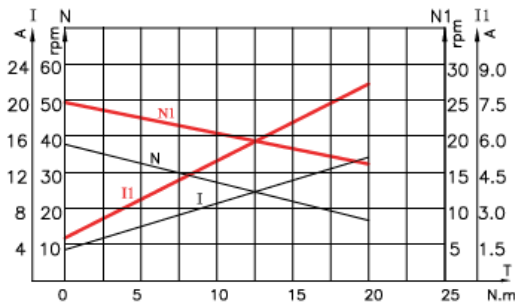
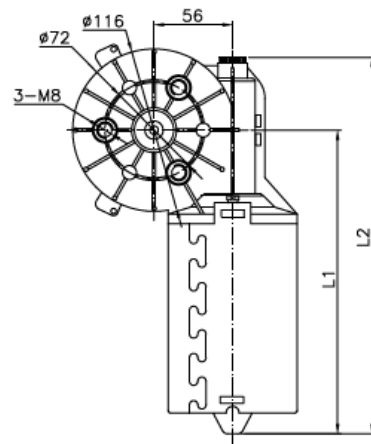
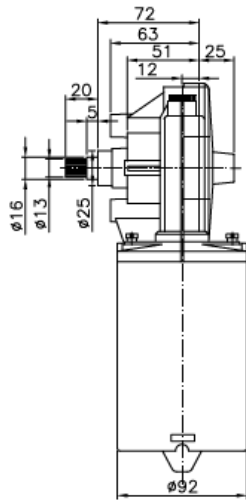
Type	No-Load Speed	Rated			Peak Torque N.m	L1 mm	L2 mm
		Speed rpm	Current A	Torque N.m			
WD1160	40	28	5.6	5.2	8.5	182	225
	31	24	4.8	7	10		
WD1160-B	40.5	28	5.8	6.5	10	199	235
	27	21.5	6.3	13.2	15		

# Wiper Motor –WD21100/21100-B



- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dual Speed Design
- Dynamically Balanced Rotor

## Mechanical



WD11100

---BLK High Speed, ---RED Low Speed

## Performance Data at Rated 12V DC

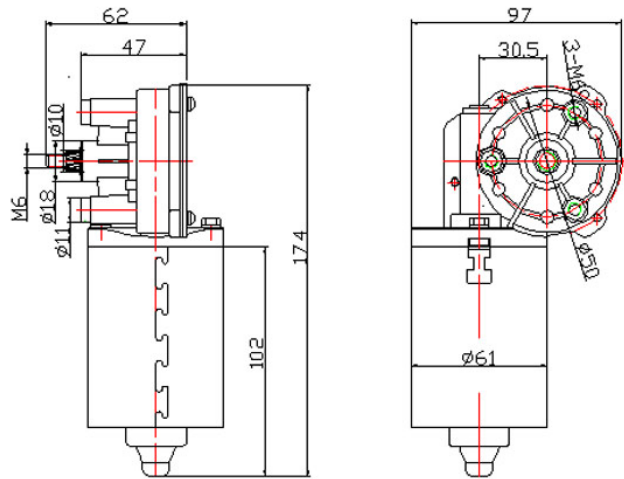
Type	No-Load Speed	Rated			Peak Torque N.m	L1 mm	L2 mm
		Speed rpm	Current A	Torque N.m			
WD21100	38	25	10	12.5	20	223.5	276.5
	25	19	5.7	13	20		
WD21100-B	37	25	9.7	12	20	235	288
	23	15	7.8	16	20		

# Wiper Motor –WD3150/3250

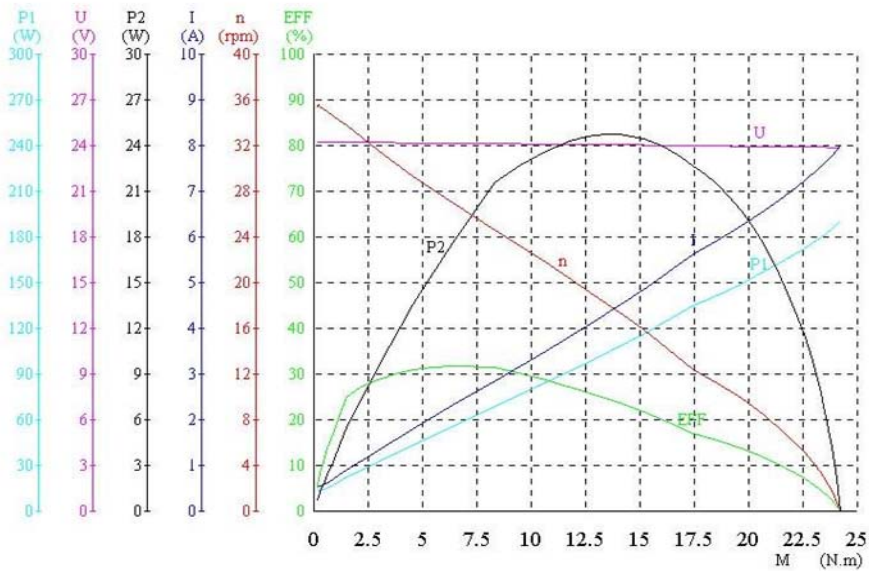


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance Data at Rated 24V DC



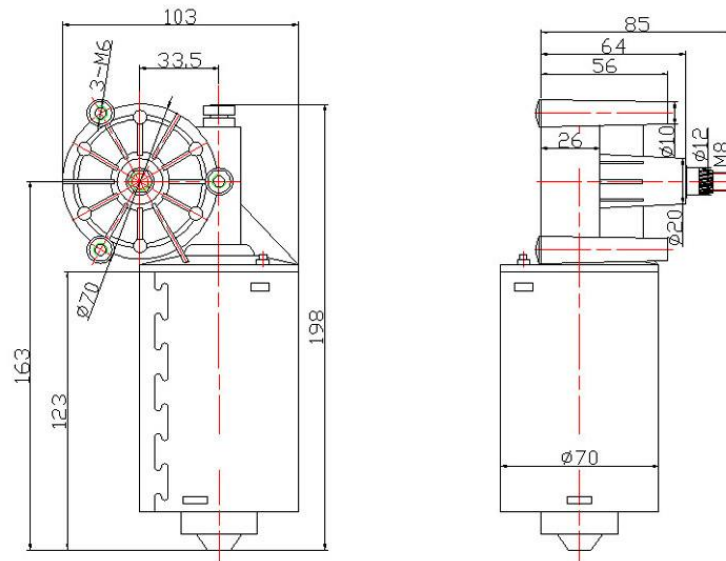
Descripton	U (V)	I (A)	P1 (W)	M (N.m)	n (rpm)	P2 (W)	Eff (%)
No_Load	24.20	0.390	9.45	0.23	35.64	0.85	9.0
Max_Eff	24.12	2.060	49.70	5.83	27.98	17.08	34.3
Max_Pout	24.00	4.432	106.4	14.58	16.89	25.79	24.2
Max_Torque	23.81	8.365	199.1	24.38	0.00	0.00	0.0
Locked_Rotor	23.81	8.365	199.1	24.38	0.00	0.00	0.0

# Wiper Motor –WD4170/4270

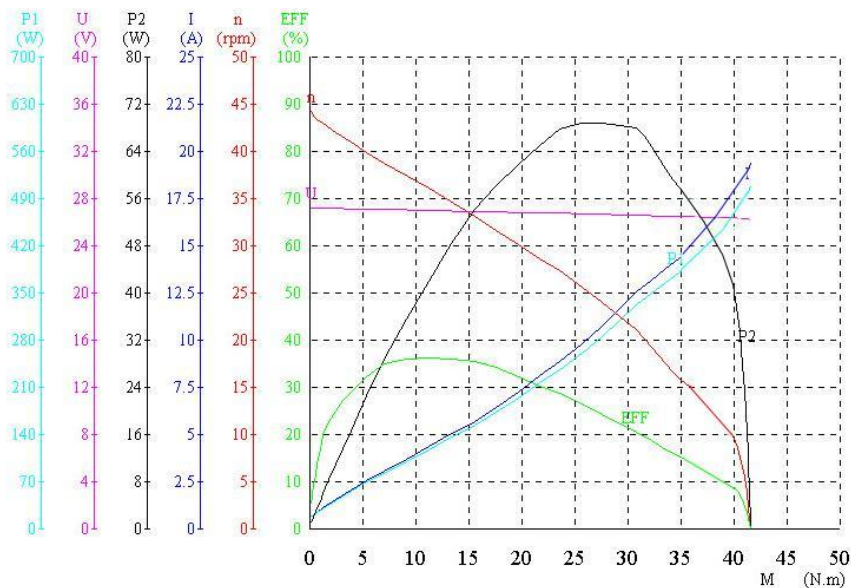


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance Data at Rated 24V DC



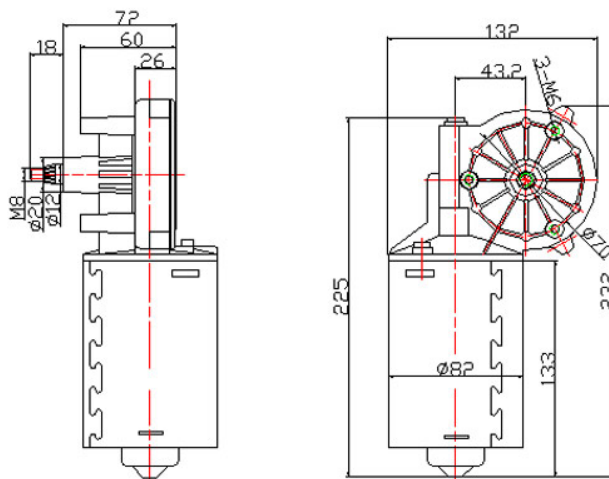
Description	U	I	P1	M	n	P2	Eff
	(V)	(A)	(W)	(N.m)	(rpm)	(W)	(%)
No_Load	27.16	0.678	18.42	0.22	44.23	1.01	5.5
Max_Eff	27.00	3.799	102.6	9.78	37.11	38.00	37.0
Max_Pout	26.66	10.08	268.8	26.62	24.98	69.63	25.9
Max_Torque	26.18	19.41	508.4	41.61	0.00	0.00	0.0
Locked_Rotor	26.18	19.41	508.4	41.61	0.00	0.00	0.0

# Wiper Motor –WD5180/5280

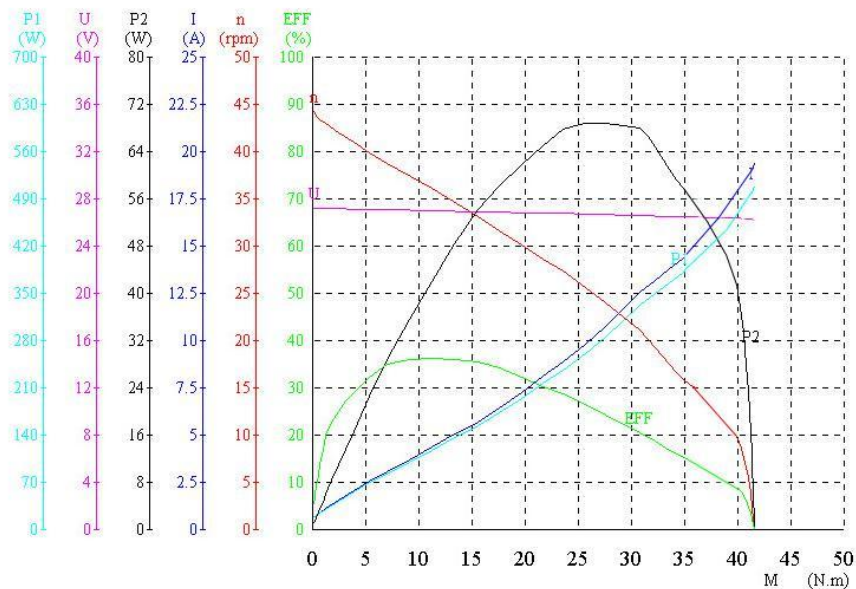


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance Data at Rated 24V DC



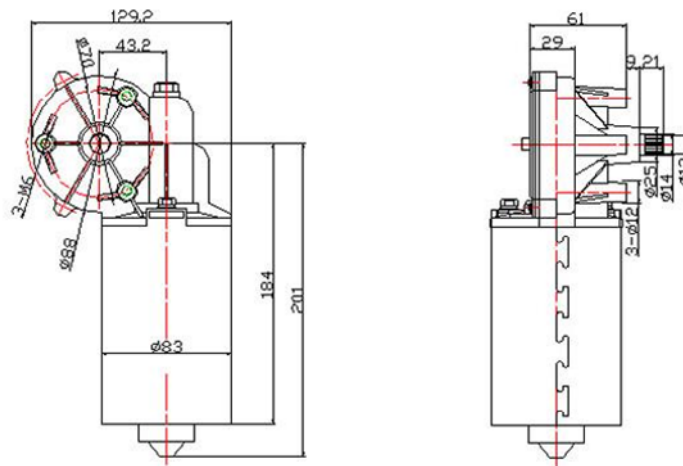
Descriptor	U	I	P1	M	n	P2	Eff
	(V)	(A)	(W)	(N.m)	(rpm)	(W)	(%)
No_Load	27.16	0.678	18.42	0.22	44.23	1.01	5.5
Max_Eff	27.00	3.799	102.6	9.78	37.11	38.00	37.0
Max_Pout	26.66	10.08	268.8	26.62	24.98	69.63	25.9
Max_Torque	26.18	19.41	508.4	41.61	0.00	0.00	0.0
Locked_Rotor	26.18	19.41	508.4	41.61	0.00	0.00	0.0

# Wiper Motor –WD61120/62120

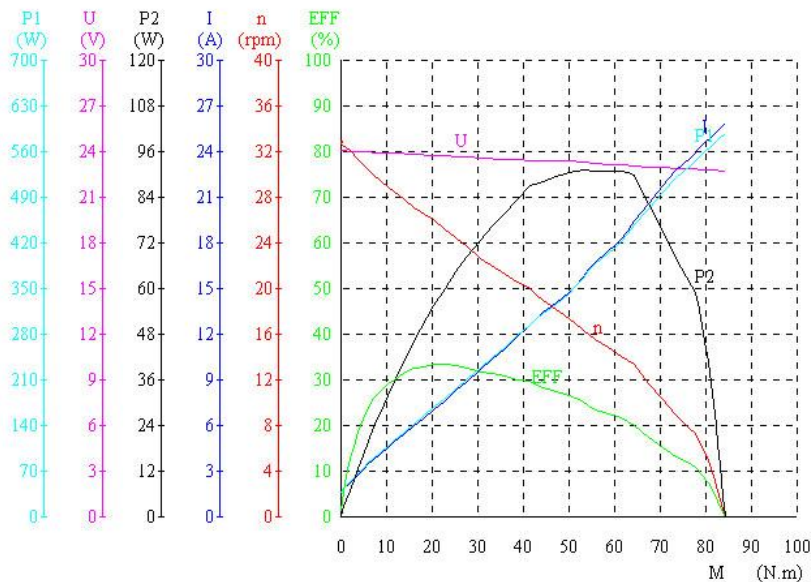


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance Data at Rated 24V DC



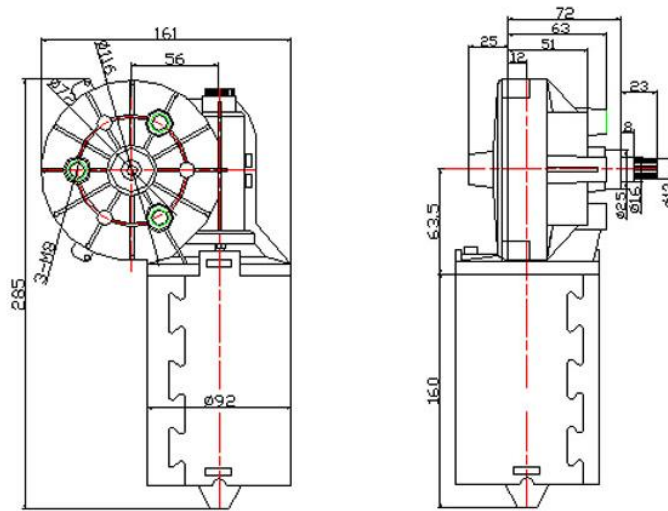
Description	U	I	P1	M	n	P2	Eff
	(V)	(A)	(W)	(N.m)	(rpm)	(W)	(%)
No_Load	24.04	1.464	35.20	0.3	32.76	1.22	3.4
Max_Eff	23.72	7.015	166.4	20.4	25.96	55.54	33.3
Max_Pout	23.14	17.39	402.6	61.1	14.32	91.72	22.7
Max_Torque	22.68	25.87	587.0	84.4	0.00	0.00	0.0
Locked_Rotor	22.68	25.87	587.0	84.4	0.00	0.00	0.0

# Wiper Motor –WD71150/82150



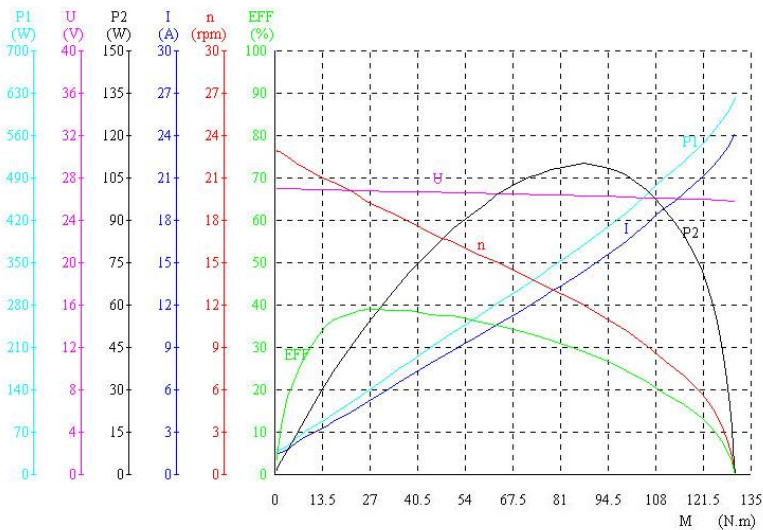
- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance

Data at



Rated 24V DC

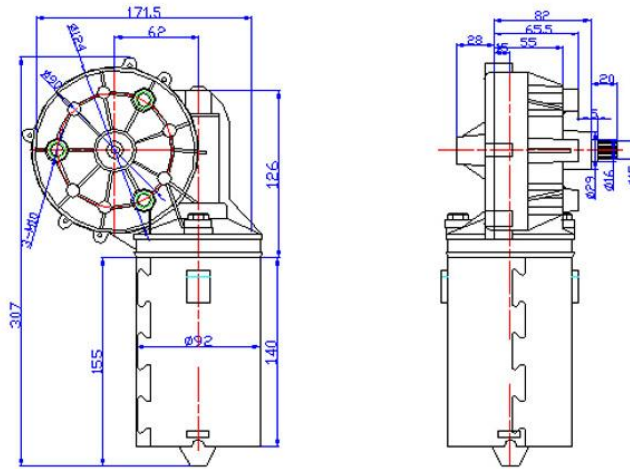
Descriptor	U (V)	I (A)	P1 (W)	M (N.m)	n (rpm)	P2 (W)	Eff (%)
No_Load	26.98	1.508	40.71	0.7	22.90	1.71	4.2
Max_Eff	26.75	5.639	150.8	30.4	18.73	59.67	39.5
Max_Pout	26.29	14.40	378.7	87.6	12.00	110.1	29.0
Max_Torque	25.79	24.11	622.0	130.7	0.00	0.00	0.0
Locked_Rotor	25.79	24.11	622.0	130.7	0.00	0.00	0.0

# Wiper Motor –WD81180/82180

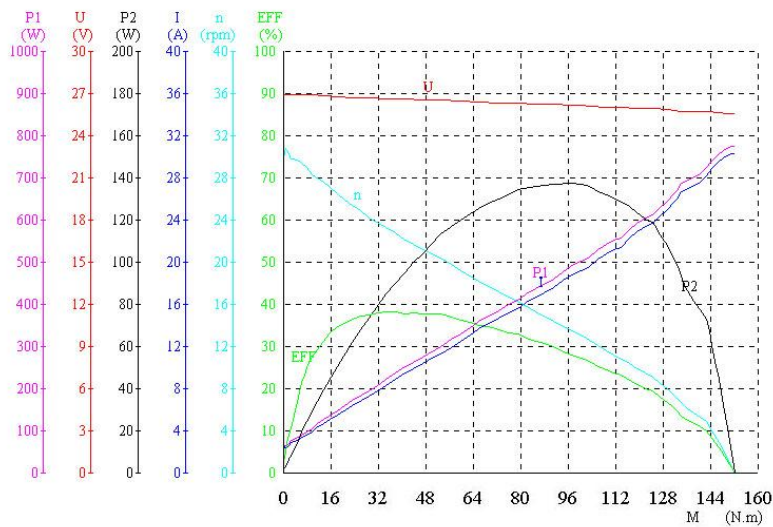


- 12VDC and 24VDC Available
- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Dynamically Balanced Rotor

## Mechanical



## Performance Data at Rated 24V DC



Descriptor	U (V)	I (A)	P1 (W)	M (N.m)	n (rpm)	P2 (W)	Eff (%)
No_Load	26.91	2.411	64.90	0.7	30.14	2.25	3.4
Max_Eff	26.61	8.649	230.1	36.9	23.04	88.91	38.6
Max_Pout	26.10	19.03	496.9	99.6	13.21	137.7	27.7
Max_Torque	25.56	30.28	774.0	152.3	0.00	0.00	0.0
Locked_Rotor	25.56	30.28	774.0	152.3	0.00	0.00	0.0