



FOSHAN SHUNDE GREEN MOTOR TECHNOLOGY CO., LTD.



GMT EV Drive Systems

Outline

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- II. AC induction motor drive system
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Why choose the Green Motor Technology

- Less cost, more mileage
- Unbeatable engine, 10 years lifespan, 2 years warranty
- Leading one-stop EV drive system solutions provider for the world
- 27 years motor manufacturing, 12 years EV conversion supply experience
- 800+ clients across 130+ countries
- 300+ customers on-site visit, 10+ years Alibaba international membership



AC induction motor drive system

Nominated motor power from 2KW to 20KW , voltage from 36V to 144V. More cost effective compared with PMSM motor, longer life and maintenance free compared with DC motors.





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Front drive kits with gearbox



Rear drive kits with axle



15KW drive kits conversion list

15KW DRIVE EV PROJECT REPORT			
Typical Electric Vehicle Performance			
			
Maximum Speed	50km/h	Vehicle size(L*W*H)	5500*1810*2250mm
Endurance mileage	100km	Seats	23
Unloading weight	2000kg	Wheelbase	3400mm
Full loading weight	3840kg	Front wheel tread	1420mm
Maximum slope	20%	Rear wheel tread	1440mm
Noise	<50dB	Tires	195/70R15C, 4pcs
Battery	Lithium battery	Driving system	96V /15kw
			
Maximum Speed	90km/h	Vehicle size(L*W*H)	3741*1475*1700 mm
Endurance mileage	100km	Seats	5
Unloading weight	1200kg	Wheelbase	2450mm
Full loading weight	1800kg	Front wheel tread	1280mm
Maximum slope	20%	Rear wheel tread	1280mm
Noise	<50dB	Tires	185/60R14, 4pcs
Battery	Lithium battery	Driving system	96V /15kw
			
Maximum Speed	70km/h	Vehicle size(L*W*H)	3741*1475*1870 mm
Endurance mileage	100km	Seats	2
Unloading weight	1200kg	Wheelbase	2450mm
Full loading weight	2000kg	Front wheel tread	1280mm
Maximum slope	20%	Rear wheel tread	1280mm
Noise	<50dB	Tires	185/60R14, 4pcs
Battery	Lithium battery	Driving system	96V /15kw

Item	Specification		Picture
Motor	Model	GEV1300MA	
	Rated Power	15kw	
	Peak Power	30kw	
	Normal Voltage	96V	
	Rated Torque	48n.m	
	Peak Torque	120n.m	
	Rate speed	3000RPM	
	Max Working Speed	6800RPM	
	Insulation Class	H	
	Cooling	air	
	Pole Pairs	2	
	Protection Class	IP55	
	Dimension (diameter/length mm)	φ220×330mm	
Controller assembly (Including controller, key switch, stall switch, accelerator, and wire harness)	Weight	55kg	
	Rated Input Voltage	96V	
	Rate output Current	120A	
	Max output Current	500A	
	Max output Capacity	55kw	
	Cooling	Air cooling	
	Protection Class	IP65	
	Communication	CAN	
	Efficiency	98%	
	Size (L*W*H) (mm)	288*179*130.5	
Accelerator	Weight	8.8kg	
	Voltage	12v	
Gearbox for front wheel drive system	Material	Plastic	
	Ratio	6:1/8:1/10:1/12:1	
	Speed capacity	8000RPM	
Rear axle for rear wheel drive system	Noise	≤65dB	
	Ratio	8:1/10:1/12:1	
	Loading capacity	3 tons	
DC Converter	Packing	Wooden box	
	Input voltage (V)	96V	
	Output voltage(V)	12V	
	Rate power	500W/1000W	
lithium battery charger	Protection class	IP65	
	Input voltage (V)	220/110	
	Battery voltage (V)	96V/108V	
Lithium battery pack	Charging current (A)	25A	
	voltage(V)	96v	
	Battery capacity(Ah)	105ah	
	Size(mm)	800*380*250	
Electric Power Steering	Cell type	3.2v LiFePO4 3.7v Li-NiCoMn	
	Rated Power	360w	
Brake pump assembly	Components	an air storage tank, a booster, a vacuum pump, brake pump	
A/C system	Rated Power	96V 800W	



Motor selection table

No.	Motor Type	Rated parameters					Peak parameter		Front cover mounting dimensions			Shaft extending part (mm)			Motor form	
		Power (KW)	N.m	VDC	RPM	Current (A)	N.m	Current(A)	Dimensions	Flange	Check the mouth size	Diameter	Spline	Spline length	Length	The largest diameter
1	GEV1124MA	2	5.2	36	3650	62.5	57	300	Φ190	Φ156.8*M6	Φ148.35*6	29	19	23	245	Φ206
2	GEV1157MA	3	11.5	48	2500	74	67	350	Φ190	Φ156.8*M6	Φ148.35*6	29	19	23	261	Φ206
1	GEV-ACX3357	4	14.2	48	2690	130	/	/	/	/	/	/	/	/	/	/
1	GEV1021MA	5	17	72	2800	80	95	400	173X173	140X140	Φ77*6	34	18	24	356	Φ206
2	GEV1070MA	5	17	48	2800	120	95	400	Φ206	Φ180*M6	Φ148.4*6	34	19	25	320	Φ206
3	GEV1140MA	5	17	72	2800	80	95	400	Φ206	Φ180*M8	Φ166*6	34	19	25	320	Φ206
4	GEV1143MA	5	17	48	2800	120	95	400	Φ206	Φ180*M8	Φ166*6	34	19	25	320	Φ206
5	GEV1144MA	5	17	60	2800	96	95	400	Φ206	Φ180*M8	Φ166*6	34	19	25	320	Φ206
2	GEV1041MA	7.5	21	72	3400	110	108	400	196X196	152X152	Φ120*4	23.8	22	35	350	Φ227
3	GEV1042MA	7.5	47	72	1500	110	108	400	196X196	152X152	Φ120*4	23.8	22	35	350	Φ227
6	GEV1240MA	7.5	25.5	72	2800	118	108	400	Φ206	Φ180*5	Φ166*6	34	19	25	320	Φ206
7	GEV-YDQ7.545680	7.5	14	72	5100	125	100	400	/	/	/	/	/	/	/	/
1	GEV1200MA	10	21	96	4500	115	120	450	196X196	152X152	Φ120*4	23.8	22	35	380	Φ227
2	GEV1204MA	10	21	96	4500	115	120	450	Φ230	Φ180*5	Φ166*6	39	24	25	331	Φ230
1	GEVDPD1596H61	15	47	96	3000	174	180	500	220*220	Φ180*5	Φ166*6	35	24	35.5	330	Φ280
2	GEVRC15-96	15	47	96	3000	170	158	500	205*205	152X152	Φ120*4	23.8	22	35	400	Φ240
1	YDQ16.6-4-5580	16.6	51.1	72	3100	250	200	500	Φ294	Φ215*6	Φ120*4	/	/	40	511	Φ330
1	GEVDPD20KW144V	20	47	144	4000	154	230	750	220*220	Φ180*5	Φ166*6	35	24	35.5	370	Φ280



Controller selection table

Rated		Peak	Protection Class
Power (KW)	Battery (VDC)	Current (A)	
2KW~5KW	36V~48V	300A	IP67
5KW~7.5KW	48~72V	450A	IP67
10KW~15KW	75V~130V	500A	IP67
15KW~20KW	90V~175V	500A	IP67
5KW~6KW	48V~72V	330A	IP67
7.5KW~8KW	48V~72V	400A	IP67
10KW~12KW	72V	500A	IP67
15KW	45V~88V	650A	IP67
15KW~20KW	96V	600A	IP67

ENERGY SAVING / ENVIRONMENTAL PROTECTION
/HIGH EFFICIENCY / INTELLIGENCE





III. PMSM high voltage drive System

Motor power ranges from 15KW to 250KW, battery voltage varies from 144V to 540V

Main features: efficiency up to 98%, liquid cooling, low temperature rise, compact size and less weight



Standardized PMSM product reference list

System scheme				Maximun system performance parameter							Motor shape parameters			Controller shape parameters			
Number	Voltage range(V)	Nominal voltage(V)	System cooling mode	Controller capacitance withstand voltage(V)	Rated power	Peak power	Rated torque	Peak torque	Rated speeds	Peak speeds	Motor outside diameter	Total length of motor	Weight	Length	Wide	High	Weight
1	110-170	144	NATURAL AIR COOLING	200	15	30	37	150	3870	7100	230	319	33	279	235	159	8.6
2	250-450	335	WATER COOLING	500	30	60	80	200	3580	9000	260	306	40	278	247	98.7	5.9
3	250-450	350	WATER COOLING	500	40	80	96	240	3980	8200	258	251	52.5	272	247	99	5.8
4	250-450	345	WATER COOLING	500	50	100	111	300	4300	9000	260	304	55	428	390	200	16
5	450-650	640	WATER COOLING	750	60	120	500	1000	1146	4500	326	380	116	343	305	149	15
6	420-750	576	WATER COOLING	900	100	180	936	3000	1020	2500	450	412	245	505	449	143	24
7	420-750	576	WATER COOLING	900	120	240	1050	3000	1100	3200	450	412	245	505	449	143	24

Motor Mobilizes Motion

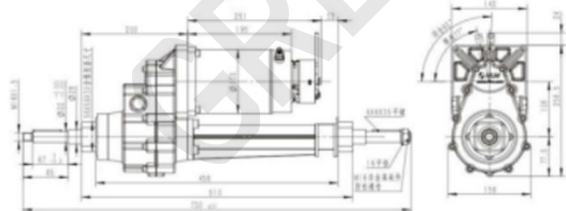
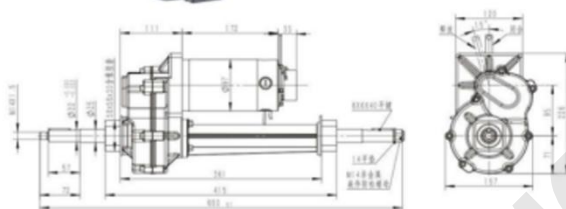




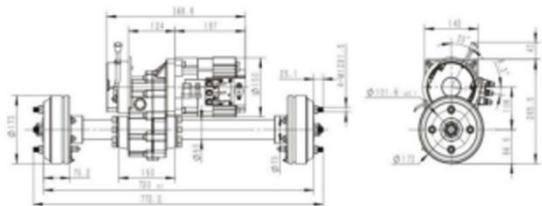
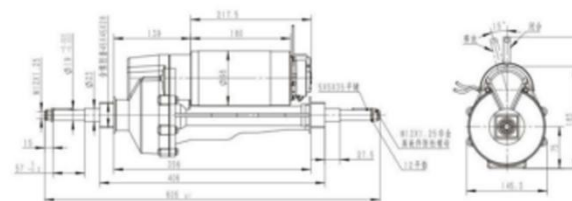
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IV. DC brushed drive system

500W Ratio: 16/25/40: 1 Brake: 6N.M/24V



800W Ratio: 20: 1 Brake: 6N.M/24V





V. Rear axle and gearbox

- Lifespan more than 8 years
- Customization accepted
- Loading capacity from 800 kg to 8000 kg

Application: off road low speed vehicle like golf cars, heavy duty truck, mini van, pickup and bus on road



Customer dimensions requested for configuration

A. Leaf spring distance (mm)

B. Total axle length: regular 950mm, 980mm, 1000mm, 1100mm, 1230mm, 1350mm

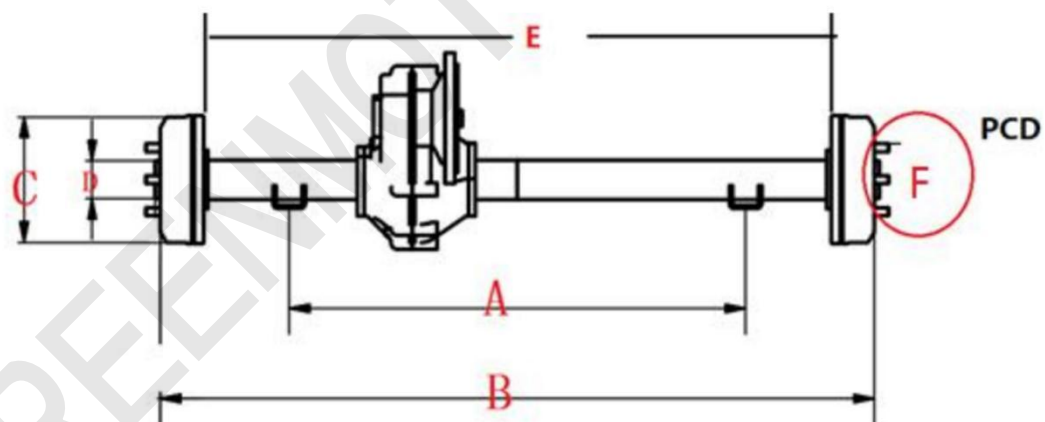
C. Drum brake diameter: 160mm, 180mm, 200mm, 220mm, 240mm

D. Wheel hub seam allowance

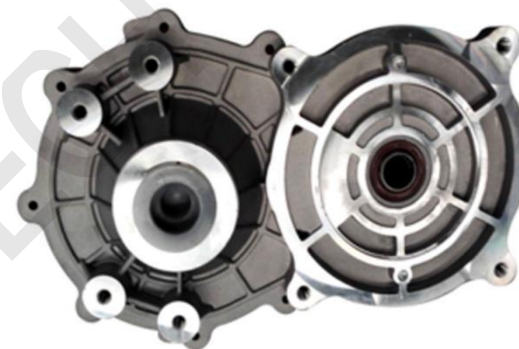
E. Internal end distance

F. Regular hub PCD: 4* Φ 100mm/4* Φ 101.6mm,/4* Φ 114.3mm/5* Φ 114.3mm

G. Reduction ratio: 6.5/8.8/10.6/12.31/14/ 16.2/17.8/18.6/19.6/21/25



Max rpm	9000/min
Torque	130N.M
Ratio	1:6 - 1:12
Nosie	Less than 70db



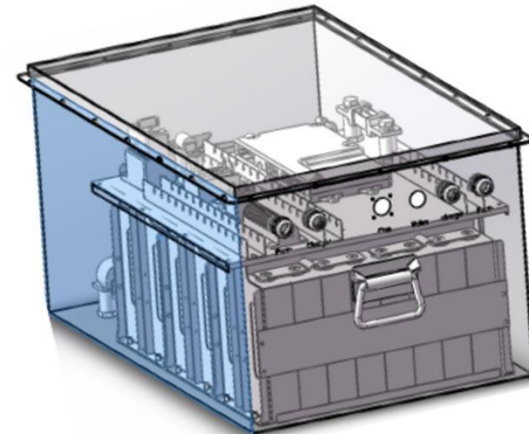
Max rpm	13000/min
Torque	200N.M
Ratio	1:6 - 1:10
Nosie	Less than 70db





VI. Cells and battery pack

- First tier brand cells adopted
- Automotive grade BMS built in
- Customized dimensions and battery capacity accepted

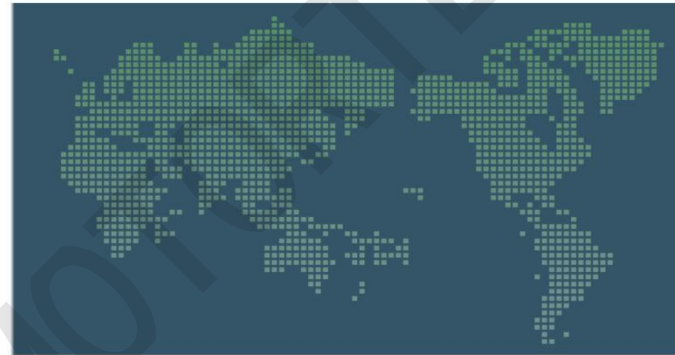




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VII. Customer Reference



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Leading one-stop EV drive system solutions provider for the world

