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*Designed and Manufactured in Taiwan by PEWC, Inc.
*The product information and specifications are subject to change
without prior notice.

Stator Production with Distributed Winding(Hairpin)



—| Stator Production with Distributed Winding(Hairpin)

A hairpin motor is formed by bending rectangular magnet wires into a hairpin shape and inserting them into an iron core at greater power density, which can generate increased power of 20% or more in the same motor size as a conventional winding motor. The overall technology and performance features include increased slot fill factor and motor current, improved heat dissipation in a slot and miniaturized motor volume.

Pacific Electric Wire and Cable Co., Ltd.'s (PEWC) ongoing dedication to product development and technological advances has earned it accolades and recognition, both at home and abroad, for its consistent production of high-quality rectangular magnet wires for EVs. To meet the increasing demand for coil windings, PEWC has expanded its manufacturing operations, establishing a comprehensive set of equipment dedicated to hairpin windings. Moreover, PEWC is capable of designing, prototyping and providing volume production, enabling PEWC to provide advanced design and production services for its customers.

PEWC possesses the engineering and technical capabilities to design and produce 160mm to 400mm outer diameter motors, which have two sets of common motor winding platforms of 220mm and 400mm and correspond to power range of 80KW to 350KW. Hence, customers can appropriately adjust the electrical parameters based on the basic structure of the platforms to customize a vehicle's feature requirements and performance.

Product of Hairpin Stator Winding	
Product Name	OD 220
Application	EV traction motors for passenger car and light truck
Features	Rectangular magnet wire : 4~10mm ²
	Core thickness range : 80mm~150mm

Reference Motor Specification		
Parameter	Unit	Value
Rated Power	kW	75
Peak Power	kW	150
Nominal Voltage	V	400
Rated Current	A _{rms}	220
Peak Current	A _{rms}	450
Rated Torque	Nm	160
Peak Torque	Nm	320
Nominal Speed	rpm	5,000
Maximum Speed	rpm	13,000
Maximum Efficiency	%	97
Stator Outer Diameter	mm	220
Stator Inner Diameter	mm	153
Stack Length	mm	110



Product of Hairpin Stator Winding	
Product Name	OD 400
Application	EV traction motors for electric bus
Features	Rectangular magnet wire : 4~10mm ²
	Core thickness range : 200mm~295mm

Reference Motor Specification		
Parameter	Unit	Value
Rated Power	kW	230
Peak Power	kW	330
Nominal Voltage	V	600
Rated Current	A _{rms}	500
Peak Current	A _{rms}	750
Rated Torque	Nm	2,300
Peak Torque	Nm	3,800
Nominal Speed	rpm	1,050
Maximum Speed	rpm	2,800
Maximum Efficiency	%	97
Stator Outer Diameter	mm	400
Stator Inner Diameter	mm	296
Stack Length	mm	280

