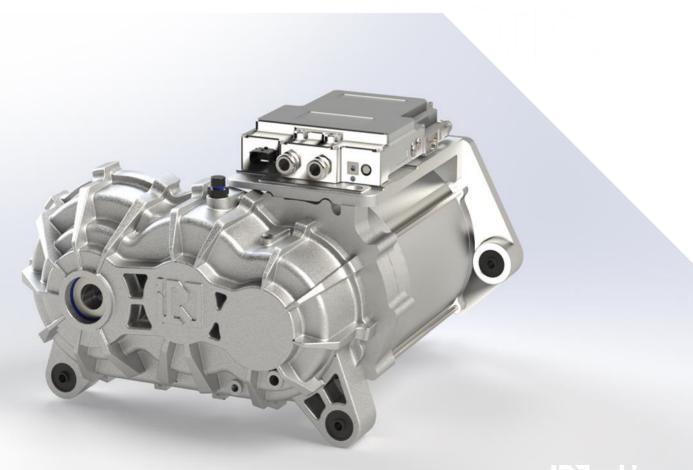




# Power Without Compromise: Peak Performance Across Every Route

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# rDA4002-3U-100









## **Inverter Features**

- ASIL D certified triple core microcontroller @300MHz
- Redundancy functions through a CPLD device for safety-critical application
- Over current, over voltage and over temperature self-protection features
- Customizable control algorithms for each application
- Torque, Speed and Id/Iq Control
- 2x CAN communication channels

#### **Gearbox Features**

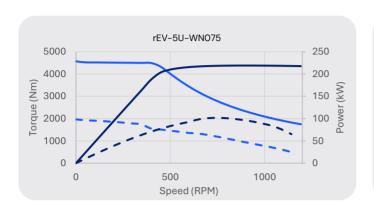
Feature	Detail
Gear Ratio	10.07:1
Oil	3 litre of 75W-90
Differential	Helical gear LSD
Mounting	Two bushed mounting points (See p4)

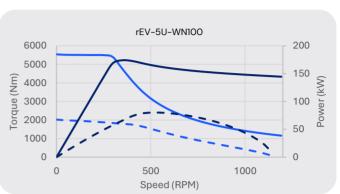


# rDA4002-3U-100



## **EDU Data**





Electrical Specification	UNIT	
Motor / Generator Type		3-Phase Radial Synchronous Flux Permanent
Applications		Magnet Motor/Generator  Automotive Motorsport, Off-Highway, Passenger Vehicle,
Applications		Commercial Vehicle
DC Voltage (Motor)	VDC	250-400
Maximum Phase Current (Motor)	Arms	510
Rotor Position Sensor		Resolver

Performance Specification		rEV-5U-WNO75	rEV-5U-WN100
Peak Torque (For 10s)	Nm	4569	5539
Peak Power (For 10s)	kw	218	174
Continuous Torque	Nm	1967	2026
Continuous Power	kw	102	80
Torque Density Peak	Nm/kg	39.7	48.2
Power Density Peak	kW/kg	1.9	1.5

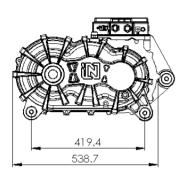
Mechanical Specification		
Motor Cross Section Dimension	mm	265.6
Package Length	mm	544.6
Mass	kg	115
Maximum Speed	rpm	1200
Axial/Radial Shaft Load	N	100N Axial, 200N Radial
Shaft Output		Internal Spline
Ingress Protection	IP	IP67
HV Connection Type		PowerLok Connectors

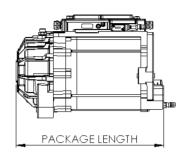
Thermal Specification		
Cooling Method		Water-Glycol 50:50
Coolant Inlet Temperature	°C	-10 to 85
Coolant Inlet Pressure	bar (gauge)	0.5-3.0
Maximum Stator Winding Temperature	°C	180
De-Rate Stator Winding Temperature	°C	165
Temperature Sensor	-	PT1000
Ambient Temperature	°C	-20 to 100

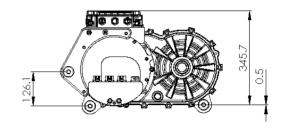
NOTE: 1) Mass: excludes cables and coolant tubes, 2) Peak Values are simulated using 400VDC and 510Arms, 3) Continuous Values are simulated using 400VDC, 70°C inlet temperature and 12 l/m flow rate, 4) The data provided in this datasheet is for guidance only and does not form part of any contract. 5) Motor, inverter, gearbox should undergo application testing to validate performance.



Motor Geometry







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