



PERMANENT MAGNET ELECTRIC MOTORS

PA44-625 AC Permanent Magnet Motor

Leverage the Benefits of PM Technology.

The Leonardo DRS PA series Permanent Magnet (PM) motors are designed to maximize the benefits of PM technology with direct water cooling. Inherently more efficient, this PM motor is one of the most power dense motors available in industry today. At 395 lb. (195 kg) the PA44-625 motor produces 1.6 HP per lb. (2.6 kW per kg) at 3000 rpm.

The completely enclosed water cooled PA44 motor has been utilized in top drive applications in the oil & gas industry for years, over 450 motors have entered service since 1985. This motor has also been in service in other applications including propulsion systems for buses and marine power and propulsion applications.

Leonardo DRS is a leader in the design and manufacture of advanced electrical machinery, focusing on machines for demanding jobs where efficient performance and precise control are required. Our rugged PM machines are ideal for marine propulsion and generation, offshore oil and gas, commercial marine, yacht, transport, drilling and pumping applications.

The PA44-625 PM Motor is used in the hybrid electric drive system in the U.S. Coast Guard's Heritage Class Offshore Patrol Cutter (OPC) being built by Eastern Shipbuilding.



BENEFITS

- Extremely power-dense
- Energy efficient
- Ideal for motor and generator applications

FEATURES

- Liquid cooling
- Multiple winding options available for application flexibility/optimization
- Available Certified IP Class I Div. II: Explosive Environments
- Choice of internal or external splined shaft

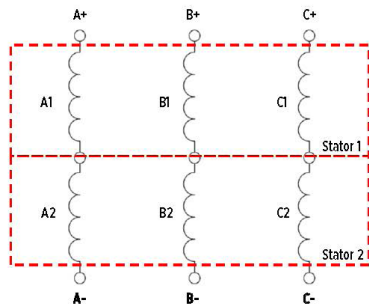
OPTIONAL FEATURES

- CE ATEX, ABS Certification
- Special Shaft Extensions
- Rotor Temperature Sensor
- Available in tandem configuration

MOTOR SPECIFICATIONS

Performance	P44-625
Rated power	625 HP (466 kW)
Rated speed	3,000 rpm
Rated torque	1,100 ft-lbs. (1491 Nm)
Rated volts	590 Vrms
Rated phase current	320 Arms
Rated frequency	700 Hz
Frequency constant	0.233 Hz/rpm
Max operating speed	3600 rpm
Rotor moment of inertia	0.9 kg m ²
Efficiency at rated speed	95%

CONNECTION DIAGRAM



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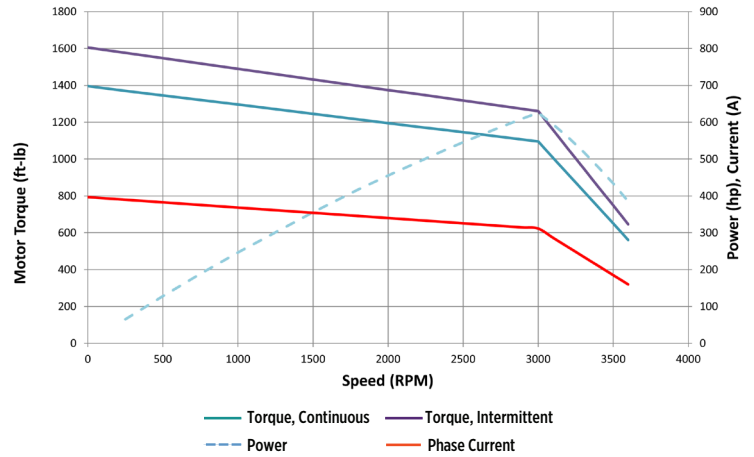
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PHYSICAL CHARACTERISTICS

Weight	395 lbs. (195 kg)
Cooling (water/glycol)	120° F (50° C) max
Coolant flow rate	7 gpm (3.5 gpm per stator)

MOTOR CHARACTERISTICS



MOTOR DIMENSIONS

