



## PERMANENT MAGNET ELECTRIC MOTORS

# PA44-625

# AC Permanent Magnet Motor

Efficient and compact power for demanding applications

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.



## 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
- Max shaft speed of 6000 RPM

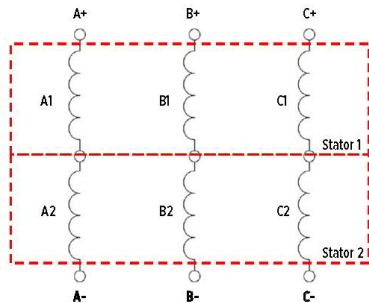
## OPTIONAL FEATURES

- CE ATEX, ABS Certification
- Special Shaft Extensions
- Rotor Temperature Sensor
- Available in tandem configuration; doubles power/torque

## MOTOR SPECIFICATIONS

<b>Performance</b>	<b>P44-625</b>
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 <sup>2</sup>
Efficiency at rated speed	95%

## CONNECTION DIAGRAM



The information in this data sheet is to the best of our knowledge, accurate as of the date of issue. Leonardo DRS, Inc. reserves the right to change this information without notice. Nothing herein shall be deemed to create any warranty, expressed or implied. Copyright © Leonardo DRS, Inc. 2000-2023 All Rights Reserved.

### Naval Power Systems

166 Boulder Drive  
Fitchburg, MA 01420 USA  
T +1 978 353 5500  
powertechnology.info@drs.com

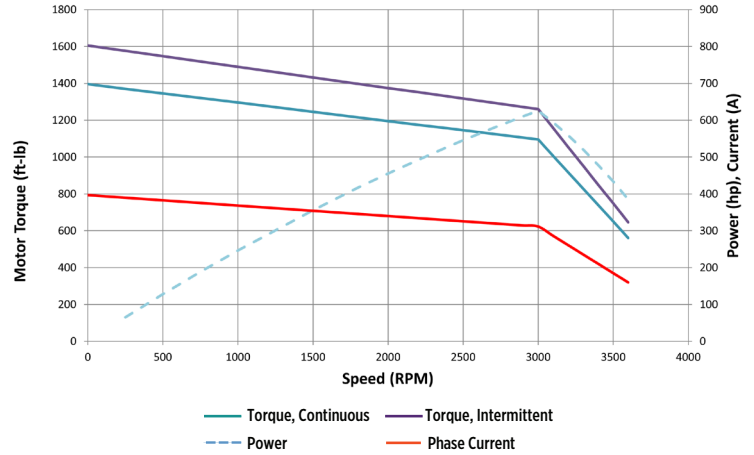
LeonardoDRS.com/Maritime

PA44-CM-2023.rev1

## 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

