

PRODUCT NOTE

Baldor-Reliance® RPM AC

Totally enclosed variable speed AC motors



Applications requiring full torque at zero speed, special base speeds, a wide constant horsepower range, high peak torque power density, low rotor inertia and high-speed capability require a rugged motor. RPM AC totally enclosed motors provide the highest level of performance and additional protection from harsh environments.

BALDOR • RELIANCE

With RPM AC motors, you don't have to compromise. No over-framing or derating. No speed range limitations. No guesswork. Choose any base speed for applications such as extruders, web processing, cut to length, machine tools, test stands, paper, metals and tire & rubber. 1000:1 constant torque standard!

Standard capabilities:

- Power dense square laminated frames are up to three frame sizes smaller than corresponding NEMA fixed-speed motors.
- Continuous full load torque from zero to base speed when used with Direct torque control (DTC) or other high performance inverters.
- 2:1 constant horsepower above base speed on most ratings.
- 200% minimum overload torque starting at base speed and below for 1 minute.

RPM AC is offered in both induction and permanent magnet (PM) rotor designs. PM rotors can further reduce the size of the motor or provide IE5 (Ultra Premium) efficiencies.

Optimized electrical designs:

Every RPM AC motor design is optimized for VSD (Variable Speed Drives).

- Greater horsepower per frame size provides fast dynamic response
- Custom power ratings, base speeds and CHP speeds are available upon request
- Premium Class H, 40C, 1.0SF
- Corona-free insulation system
- Surpasses NEMA MG1 Part 31 for voltage spikes
- Three thermostats as standard (one per phase) for optimal winding protection

Standard features:

- Rugged laminated steel frame construction for FL210 - FL5800 frames
- Cast iron brackets for FL180 - FL5800 frames
- Exclusive lubricated-for-life system, with oversized ball bearings, on FL180 - FL250 frames
- Positive Lubrication System (PLS®) on all FL280-FL5800 frames
- Encoder mounting provisions on all frames
- Three thermostats (one per phase)
- Shaft grounding brush on all frame sizes
- Provisions for mounting ABB Ability™ Smart Sensor
- QR code on nameplate for web access to important motor data

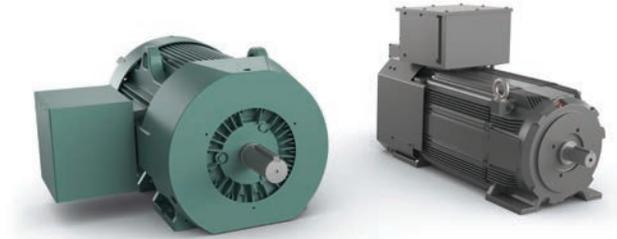
Enclosures available:

- Totally enclosed for corrosive or harsh environments: IP44, IP54, IP55, and IP56
- Enclosure enhancements available: Crane and hoist duty, outdoor duty/weatherproof, paper mill duty, pickle duty, press duty/high vibration, washdown and XT (eXtra Tough)
- Available in standard NEMA frame sizes

Commitment to quality:

RPM AC motors are manufactured at our Gainesville, Georgia plant under a certified ISO 9001 program.

All RPM AC motors are available with UL component recognition, CE mark and CSA approval.



Totally enclosed power density chart induction designs (Hp by frame size, 1800 RPM)

Hp (kW)	NEMA Std TEFC ⁽¹⁾	RPM AC TENV ⁽²⁾	RPM AC TEFC ⁽³⁾	RPM AC TEBC ⁽²⁾
3 (2.2)				
5 (3.7)	180	180	180	
7.5 (5.6)				180
10 (7.5)	210			
15 (11.2)		210		
20 (14.9)			210	
25 (18.6)	280	250		
30 (22.4)			250	210
40 (30)		280		
50 (37)	320			
60 (45)		320	280	250
75 (56)		360		
100 (75)	400	400	320	
125 (93)		440		280
150 (112)			360	320
200 (149)			400	
250 (186)				360
300 (224)			440	400
500 (373)	-	-		440
600 (447)				
700 (522)				
800 (597)			5800	5800
900 (671)				
1000 (746)				

(1) 2:1 CT, 4:1 VT

(2) 1000:1 CT

(3) 1000:1 CT 3 - 400 Hp (2.2 - 300 kW), 4:1 VT 500 - 1000 Hp (373 - 746 kW)