

# RPM™ AC MOTORS

## Drip-Proof Guarded Force Ventilated Inverter Duty AC Motors

When AC adjustable speed motor applications demand high performance over wide speed ranges, RPM AC motors offer the perfect solution.

Take advantage of these unique benefits, available only with RPM AC Motors, on your next inverter duty application.



### DPG-FV RPM AC motors offer these capabilities:

- Most compact size and lowest weight
- Continuous constant torque from zero RPM to base speed (1000:1).
- A wide selection of base speeds and modifications to support unique application requirements. Low base speeds for winders and slitters. Use RPM AC Motor Wizard CD to optimize motor design to match your application - free download from [www.reliance.com](http://www.reliance.com)

### Optimized Electrical Designs:

Every RPM AC motor design is optimized for adjustable frequency service - not just a re-rate or over framing of a standard motor. Rotor slot configuration and stator windings are optimized to:

- Provide greater horsepower per frame size - up to three frame diameters smaller than corresponding NEMA fixed-speed motors.
- Highest Torque to Inertia - up to 80% less inertia than standard NEMA frame motors, which allows for faster acceleration with less inverter KVA.
- 150% minimum overload torque for 1 minute.

### Premium Class H insulation system is standard:

To assure long life in all applications, RPM AC DPG-FV motors utilize our Corona-Free insulation system. This provides much longer life for AC motors compared to motors that only use "corona resistant or spike resistant" materials. This system has been

tested for compatibility with pulse width modulated controller waveforms and surpasses the requirements of NEMA MG.1 Part 31 for voltage spikes.

All motors include three thermostats as standard (one per phase) for optimum winding protection.

### Superior Mechanical Features:

The feet-on-bracket design provides a rigid, vibration-resistant, mechanical assembly with maximum bearing support to further improve structural dynamics.

- Laminated steel frame construction provides the highest possible power densities (HP/frame size) allowing motor to fit in minimal space. (FL180 has extruded aluminum frame)
- All RPM AC motors include a machined mounting surface for easy installation of a feedback device.
- Cast iron brackets with concentric bearing and frame fits are machined in a single operation to ensure uniform air gap and minimum noise.
- PLS\* (Positive Lubrication System) with inner cap and open bearing provides a generous grease supply and long bearing life. PLS is a standard feature for L280 - L440 frames.
- Exclusive Lubricated For Life System, with oversized ball bearings, are standard on all FL180 - RL250 frames.
- Easily modified to splash-proof, totally enclosed dual cooled or totally enclosed separately ventilated.

✓ Aggregate/Cement

✓ Food

✓ Mining

✓ Forest/Paper

✓ Petro/Chem

✓ Unit/Baggage Handling

✓ HVAC/Industrial Air Handling

✓ Environmental/Fluid Power

✓ Automotive

✓ Metals

- VPI insulation is standard on all L440 Frames
- Insulated opposite drive end bearing is standard on all L440 Frames.
- Optimum pole design:
  - 4 pole in FL180 - L400
  - 6 pole in L440 frames
- See data sheets RAPS-1682 & RAPS-1683 for RPM AC Totally Enclosed products.

### Commitment to Quality:

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

All RPM AC motors are available with U.L. component recognition, CE mark and CSA approval. Also, a complete IEC product line is available.

HP	BASE SPEED	FRAME	MODEL NUMBER	ROTOR INERTIA (1)	TYPICAL F/L AMP (460V) (2)	DIMENSION SHEET
15	1750	FL1838Z	P18T307	0.528	21	617230-1
	1150	FL1844Z	P18T308	0.645	21	617233-1
20	1750	FL1838CZ	P18T328	0.528	26	617230-23
	1150	FL1852CZ	P18T329	0.80	27	617236-23
25	1750	FL1844CZ	P18T330	0.645	32	617233-23
	1150	RL2162Z	P21R237	1.92	34	617202-1
30	1750	FL1852CZ	P18T331	0.80	39	617236-23
	1150	RL2168Z	P21R250	2.32	38	617206-1
40	1750	RL2162Z	P21R211	1.92	52	617202-1
	1150	RL2168Z	P21R251	2.32	51	617206-1
50	1750	RL2168Z	P21R254	2.32	65	617206-1
	1150	RL2570Z	P25R217	3.50	65	617214-1
60	1750	RL2168Z	P21R247	2.32	74	617206-1
	1150	RL2578Z	P25R237	4.20	73	617218-1
75	1750	RL2570Z	P25R209	3.50	96	617214-1
	1150	RL2586Z	P25R238	4.90	91	617222-1
100	1750	RL2578Z	P25R239	4.20	119	617218-1
	1150	L2882Z	P28L239	8.30	124	616760-1
125	1750	RL2586Z	P25R233	4.90	148	617222-1
	1150	L2898Z	P28L237	11.10	151	616760-1
150	1750	L2882Z	P28L238	8.30	180	616760-1
	1150	L3203Z	P32L235	21.00	180	616764-1
200	1750	L2898Z	P28L233	11.10	237	616760-1
	1150	L3213Z	P32L233	24.00	236	616764-1
250	1750	L3203Z	P32L234	21.00	300	616764-1
	1150	L3614Z	P36L207	45.00	300	609998-1
300	1750	L3213Z	P32L229	24.00	360	616764-1
	1150	L4034Z	P40L205	73.00	360	609998-1
350	1750	L3614Z	P36L210	45.00	415	609998-1
400	1750	L3614Z	P36L212	45.00	477	609998-1
	1150	L4046Z	P40L237	85.00	451	609998-1
500	1750	L4034Z	P40L1315	73.00	557	609998-1
600	1750	L4046Z	P40L1316	85.00	666	609998-1
700	1750	L4429	P44L1320	150.00	875	615917-1
800	1750	L4440	P44L1341	169.00	975	615917-1
	1450	L4461	P44L1321	207.00	980	615917-1
900	1750	L4451	P44L1345	189.00	1095	615917-1
1000(3)	1750	L4461	P44L1344	207.00	1202	615917-1

(1) lb ft<sup>2</sup>

(2) All ratings available in 460V or 575V

(3) Requires a minimum inverter carrier frequency of 4KHz

[www.ptplace.com](http://www.ptplace.com) [www.dodge-pt.com](http://www.dodge-pt.com) [www.reliance.com](http://www.reliance.com) [www.endorsia.com](http://www.endorsia.com)



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