

# Large AC - GPM Induction Motors

## Stock Features:

- Suitable for use on a VFD 2:1 CT, 10:1 VT\*
- Drive end slinger
- Insulated opposite drive end bearing
- High efficiency
- Cast iron frame, end shields and inner caps
- 100 ohm platinum winding RTD's
- Provisions for bearing RTD's
- Space heaters
- Ground lug in the conduit box
- CSA approved
- "L" and "T" shafts are ball bearing and convertible to roller bearing
- "S" and "TS" shafts are ball bearing for coupled loads
- Belted duty "LR" shafts are roller bearing and convertible to ball bearing
- Paint - Specially formulated modified epoxy coating with UV protection

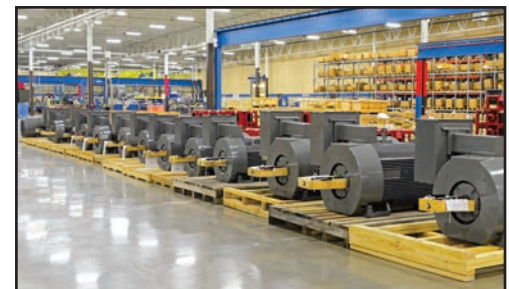


## Our Job is to make yours easier...

Selecting and purchasing a Large AC motor doesn't have to be difficult, and now it's not! Baldor's GPM product family of Large AC induction motors have many popular ratings in stock and an extensive array of pre-engineered ratings ready for order on short lead time. Buying a Large AC motor has never been easier. Performance data, drawings, etc., are readily available to ensure the right motor is selected for your application. Common feature modifications are available on the entire product family to suit a wide variety of industrial needs.

## Easy to Select, Easy to Buy, Easy to Install/Own

All ratings pre-engineered  
Performance data, drawings, etc., readily available  
Optional feature sets available  
Local Baldor District Office sales support when requested  
Available in-stock or short lead times  
Strategic warehousing utilizing multiple stocking locations  
Motor commissioning/installation available through ABB Service Group  
User-friendly installation & operation manuals



*Stock ratings available off the shelf!*

## Suitable for use on variable frequency drives\*

Use of a VFD can greatly increase system efficiency in many centrifugal load applications. Indicators are that VFD use will increase in the coming years.  
All GPM motors are suitable for use on a VFD, including ABB's vast line of inverter drives.

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## Stock TEFC – Totally Enclosed Fan Cooled, Foot Mounted, 2300/4000 Volt, Three Phase, 250 - 1000 Hp

Hp	kW	RPM	NEMA Frame	Catalog No.	List Price	Mult. Sym.	Amps @ High V.		F.L. Torque Lb - Ft.	Efficiency %			Power Factor %			Bearings		"C" Dim
							F.L.	L.R.		1/2	3/4	F.L.	1/2	3/4	F.L.	DE	ODE	
250	186	3600	449	EM44252TS-2340	\$ 33,234	LG	32,8	221,8	367	93,8	94,8	95,0	74	83	86	6313	6313	49,49
250	186	1800	L449	EM44254T-2340	36,300	LG	32,4	237	735	94,6	95,1	95,0	79	85	88	6222	6318	60,21
250	186	1200	5010	EM50256LR-2340	41,964	LG	34	228,1	1100	93,7	94,6	94,6	74	82	85	NU324	6222	71,42
300	224	3600	L449	EM44302TS-2340	40,255	LG	38,7	538	441	94,3	95,2	95,3	77	85	87	6313	6313	56,48
300	224	1800	L449	EM44304T-2340	36,979	LG	39,1	303,3	882	94,5	95,1	95,0	77	84	87	6222	6318	60,21
300	224	1200	5010	M50306LR-2340	43,298	LG	40,3	274,6	1609	94,0	94,7	94,7	74	82	85	NU324	6222	71,42
350	261	3600	5010	EM50352S-2340	43,766	LG	45,2	317,6	514	93,6	94,7	95,0	81	87	89	6313	6313	67,45
350	261	1800	5008	EM50354L-2340	44,000	LG	45,5	309,6	1026	94,0	94,9	95,0	72	80	84	6322	6222	71,42
350	261	1200	5010	M50356LR-2340	49,383	LG	46,5	298,8	1769	94,4	94,9	94,8	75	83	86	NU324	6222	71,42
400	298	3600	5010	EM50402S-2340	48,213	LG	50,4	317,6	476	93,9	94,8	95,0	83	88	90	6313	6313	67,45
400	298	1800	5010	EM50404L-2340	47,745	LG	52,4	315,6	1077	94,9	95,4	95,3	78	84	86	6322	6222	71,42
400	298	1200	5012	EM50406LR-2340	54,064	LG	52,9	354,6	2240	94,7	95,2	95,0	76	83	86	NU324	6222	79,44
450	336	3600	5010	EM50452S-2340	56,872	LG	56,7	358,9	539	94,4	95,2	95,2	82	88	90	6313	6313	67,45
450	336	1800	5010	EM50454L-2340	51,957	LG	58,8	351,9	1218	95,3	95,7	95,5	79	85	86	6322	6222	71,42
450	336	1200	5012	EM50456LR-2340	62,021	LG	59,5	399,1	2456	94,8	95,3	95,1	75	83	86	NU324	6222	79,44
500	373	3600	5010	EM50502S-2340	62,021	LG	63	409,4	616	94,6	95,4	95,4	81	88	90	6313	6313	67,45
500	373	1800	5012	EM50504L-2340	59,681	LG	65,2	400,1	1451	95,3	95,7	95,5	79	85	87	6322	6222	79,42
500	373	1200	5012	EM50506LR-2340	70,915	LG	64,4	380,9	2373	94,8	95,4	95,3	80	86	88	NU324	6222	79,44
600	447	3600	5010	EM50602S-2340	67,872	LG	75,1	470,7	758	94,4	95,4	95,6	84	89	90	6313	6313	79,00
600	447	1800	5012	EM50604L-2340	70,213	LG	77,8	484,5	1808	95,7	96,0	95,8	79	85	87	6322	6222	79,42
600	447	1200	5810	EM58606LR-2340	78,404	LG	78,9	483,2	2384	95,2	95,7	95,7	77	83	86	NU326	6224	90,81
700	522	3600	5810	M58702S-2340	71,851	LG	89,4	535,1	883	94,1	95,0	95,2	81	87	89	6313	6313	95,59
700	522	1800	5012	EM50704L-2340	77,234	LG	90,4	576,3	2068	95,9	96,3	96,1	79	85	87	6322	6222	79,42
800	597	3600	5810	EM58802S-2340	89,362	LG	102,9	702,8	1062	94,5	95,3	95,5	77	85	88	6313	6313	95,59
800	597	1800	5012	EM5804L-2340	89,872	LG	102,2	631,4	2351	95,4	95,9	95,8	81	86	88	6322	6222	90,97
900	671	1800	5810	EM58904L-2340	94,553	LG	115,4	692,9	2637	95,9	96,3	96,2	80	85	86	6324	6224	90,81
1000	746	1800	5810	EM581004L-2340	108,596	LG	128,9	818,7	2930	95,8	96,2	96,1	78	85	87	6324	6224	102,27

\*NOTES: For use on vfd, it is highly recommended to insulate the drive end bearing and add a shaft grounding system in order to address concerns regarding shaft currents that may be imposed upon the motor by a vfd as defined in NEMA MG1, Part 31.4.4.3.

Motor is suitable for use on inverter only in conjunction with an isolation transformer or other Common Mode Voltage Elimination.

1.0 Service Factor when used on VFD

### Large AC - GPM Mod-Express Options

Stock GPM MV motors can be modified using Baldor's Mod-Express program. Modifications are done in Fort Smith, AR and Kings Mountain, NC. More information available in the Mod-Express section of the CA501.

<b>Balance</b>	<b>Export Packaging</b>	<b>Weatherproofing</b>
M1A Precision Balance	M14A Open Crate	M27B Upgrade to IP55 Protection
	M14B Enclosed Crate	M27C Corrosion Resistant Treatment of windings
<b>Bearings</b>	<b>Nameplates</b>	<b>Shaft Modification</b>
M2B Ball to Roller Conversion 1800 RPM or Below	M15A Provide Auxiliary Data Plate	M29D Convert "T" Frame to "TS" Frame
M2C Bearing Housing Thermocouple	M15B Replace Nameplate	M29J Convert "L" Frame to "S" Frame
M2D Bearing RTD's	M15E Mail Nameplates to Customer	
M2F Insulated Bearing	<b>Paint</b>	<b>Tachometer Mounting</b>
M2G Roller to Ball Conversion 1800 RPM or Below	M17A Paint Motor to Baldor Stock Paint Color	M31D Add Encoder
	M17B Paint Motor or Parts to Custom Color	<b>Testing</b>
<b>Drains</b>		M32A Performance Testing Per IEEE 112
M7B Install "T" Drain	<b>Hardware</b>	M32B Witness IEEE 112 Performance Testing
	M20A Exchange Plated Hardware for Stainless Steel	<b>Shaft Grounding</b>
<b>Seals</b>		M39A Shaft Grounding Systems
M12B Install Inpro/Seal®	<b>Tropicalization</b>	<b>Vibration Detectors</b>
	M26A Protection of Windings and Mechanical Parts	M41A Provisions for Vibration Detection
<b>Mountings</b>		M41B Add Vibration Switch
M13F-2 NEMA F2 Mounting		M41C Add Velocity Transducer
M13K Two Piece Transition Base		Add Accelometer
M13L Steel Fan Cover		
M13M Low Noise Fan Cover		

**GPM Pre-Engineered Ratings**

In addition to many popular ratings in stock, custom motors are available in pre-engineered designs ranging from 250 - 1500 HP, 2-8 pole, 460, 575, 2300/4000 Volt, Three Phase, 60 Hz, Totally Enclosed Fan Cooled. An LG multiplier will be used on all pre-engineered ratings.

**Pre-Engineered TEFC - 460V Designs**

Poles 60Hz RPM	2 3600		4 1800		6 1200		8 900	
	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price
250	M50252S-4	\$ 23,727	M50254S-4	\$ 23,543	M50256S-4	\$ 27,137	EM50258S-4	\$ 38,200
300	M50302S-4	28,765	M50304S-4	26,333	M50306S-4	30,779	M50308S-4	43,129
350	M50352S-4	31,281	M50354S-4	31,460	M50356S-4	35,123	M50358S-4	49,699
400	M50402S-4	34,292	M50404S-4	34,010	M50406S-4	38,422	M50408S-4	56,894
450	M50452S-4	40,488	M50454S-4	36,943	M50456S-4	44,201	M50458S-4	60,346
500	M50502S-4	44,180	M50504S-4	42,579	M50506S-4	50,430	M58508S-4	74,159
600	M50602S-4	48,294	M50604S-4	51,239	M50606S-4	58,594	M58608S-4	78,837
700	M58702S-4	51,116	M50704S-4	59,159	M58706S-4	65,188	M450708S-4	105,121
800	M58802S-4	69,833	M50804S-4	63,818	M58806S-4	73,046	M450808S-4	105,121
900			M50904S-4	69,190	M450906S-4	92,733	M500908S-4	121,922
1000			M4501004S-4	100,178	M5001006S-4	105,979	M5001008S-4	121,922
1250			M5001254S-4	120,836	M5001256S-4	115,034		
1500			M5001504S-4	133,358				

**Pre-Engineered TEFC - 575V Designs**

Poles 60Hz RPM	2 3600		4 1800		6 1200		8 900	
	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price
250	M50252S-5	\$ 23,727	M50254S-5	\$ 23,543	M50256S-5	\$ 27,137	EM50258S-5	\$ 38,200
300	M50302S-5	28,765	M50304S-5	26,333	M50306S-5	30,779	M50308S-5	43,129
350	M50352S-5	31,281	M50354S-5	31,460	M50356S-5	35,123	M50358S-5	49,699
400	M50402S-5	34,292	M50404S-5	34,010	M50406S-5	38,422	M50408S-5	56,894
450	M50452S-5	40,488	M50454S-5	36,943	M50456S-5	44,201	M50458S-5	60,346
500	EM50502S-5	44,180	M50504S-5	42,579	M50506S-5	50,430	M58508S-5	74,159
600	M50602S-5	48,294	M50604S-5	51,239	M50606S-5	58,594	M58608S-5	78,837
700	M58702S-5	51,116	M50704S-5	59,159	M58706S-5	65,188	M450708S-5	105,122
800	M58802S-5	69,833	M50804S-5	63,818	M58806S-5	73,046	M450808S-5	105,122
900			M50904S-5	69,190	M450906S-5	92,734	M500908S-5	121,923
1000			M4501004S-5	102,965	M5001005S-5	105,923	M5001008S-5	121,923
1250			M5001254S-5	120,835	M5001256S-5	115,033		
1500			M5001504S-5	124,863				

**Pre-Engineered TEFC - 2.3/4kV Designs**

Poles 60Hz RPM	2 3600		4 1800		6 1200		8 900	
	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price	Catalog #	List Price
250	EM44252S-2340	\$ 33,234	EM44254S-2340	\$ 36,300	M50256S-2340	\$ 41,964	EM50258S-2340	\$ 48,317
300	EM44302S-2340	40,255	EM44304S-2340	36,979	M50306S-2340	43,298	EM50308S-2340	54,916
350	EM50352S-2340	43,766	EM50354S-2340	44,000	M50356S-2340	49,383	EM50358S-2340	63,165
400	EM50402S-2340	48,213	EM50404S-2340	47,745	EM50406S-2340	54,064	EM50408S-2340	72,357
450	EM50452S-2340	56,872	EM50454S-2340	51,957	EM50456S-2340	62,021	EM58458S-2340	78,956
500	EM50502S-2340	62,021	EM50504S-2340	59,681	EM50506S-2340	70,915	EM58508S-2340	88,384
600	EM50602S-2340	67,872	EM50604S-2340	70,213	EM58606S-2340	78,404	EM58608S-2340	100,169
700	M58702S-2340	71,851	EM50704S-2340	77,234	EM58706S-2340	89,562	EM450708S-2340	113,182
800	EM58802S-2340	89,362	EM50804S-2340	89,872	EM450806S-2340	102,853	EM450808S-2340	122,452
900			EM58904S-2340	94,553	EM450906S-2340	112,006	EM500908S-2340	141,652
1000			EM581004S-2340	108,596	EM4501006S-2340	115,432	EM5001008S-2340	141,652
1250			EM5001254S-2340	138,765	EM5001256S-2340	126,546	EM5001258S-2340	144,599
1500			EM5001504S-2340	144,882	EM5001506S-2340	139,139	EM5001508S-2340	150,998

## Custom Large AC - GPM Induction Motors

In addition to many popular ratings in stock, custom motors are also available in pre-engineered designs ranging from 250 - 1500 Hp, 2-8 pole, 460, 575, 2300/4000 Volt, Three Phase, 60 Hz, Totally Enclosed Fan Cooled. See page 4 for pre-engineered capabilities and ratings.

### Standard Features:

- F1 Mounting
- IP54 Ingress Protection
- Class F insulation / Class B temperature rise
- Cast iron construction
- NEMA 4 main terminal box with ground lug
- Auxiliary terminal box with terminal strip
- Winding RTD's - 2 Per phase, 100 ohm, platinum 3 wire
- Provisions for bearing RTD's
- Grease lubricated ball bearings
- Insulated opposite drive end bearing
- Space Heaters 100-125V/200-240V to operate at 120/240V
- CSA approved
- Suitable for use on inverter 10:1 VT\* (consult factory for constant torque speed range of GPM custom product)
- 1.15SF on Sine Wave and 1.0SF on VFD\*
- Aluminum die-cast rotor construction or copper/copper alloy rotor construction
- Foot mounted with dowel holes and provisions for vertical jackscrews
- Dual drilled foot mounting
- Paint - Specially formulated modified epoxy coating with UV protection

### GPM Non-Stock Optional Features

Feature	Description	Frame	List Price
<b>Mounting</b>	F2 swingarm mount	449T - 5810	\$ -
		450 - 500	\$ -
<b>Bearing RTD's</b>	Platinum, 100Ω @ 0°C, single element, 1 per bearing	449T - 5810	\$ 953
		450 - 500	\$ 1,074
<b>Balance</b>	Precision balance (0.10 in/sec)	449T - 5810	\$ 236
		450 - 500	\$ 3,200
<b>Voltage Surge Protection Package</b>	Lightning Arrestors, Bus Bars, Surge Capacitors, Oversized Conduit Box	449T	\$ 12,582
		5008-5810	\$ 16,014
		450 - 500	\$ 17,110
<b>IP55 Package</b>	IP55(motor), SS Hardware, Internal Epoxy Coating, SS Breather/Drain	449T	\$ 1,327
		5008-5810	\$ 1,959
		450 - 500	\$ 3,381
<b>Belted Duty Package</b>	Drive-End Cylindrical Roller Bearing and 4140 Shaft Steel(Baldor)/42CrMo4 Shaft Steel (ABB)	449T	\$ 2,097
		5008-5810	\$ 1,742
		450 - 500	\$ 5,437
<b>VFD Application Package</b>	Insocoat Bearings & Shaft Ground Brush	449T	\$ 3,431
	Insulated Brackets & Shaft Ground Brush	5008-5810	\$ 2,365
<b>Encoder</b>	Dynapar HS-35 (1024 ppm) and stub shaft	449T - 5810	\$ 1,411
	Leine & Linde 1024 ppm	450 - 500	\$ 3,198
<b>Suitable for Vibration Detection</b>	Provisions for vibration detection, which includes pipe extension and aluminum block each end -	449T - 5810	\$ 2,365
	Includes M8 x 1 Tap each end for H,V,A positions	450 - 500	\$ 2,558

\*\* Belted duty dimension drawings differ from base model designs in 449, 5000, & 5800 series frame sizes



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