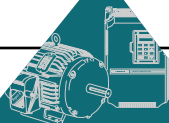


BALDOR[®] MOTORS AND DRIVES

Inverter Drive[®] and Vector Drive[®] Motors



Why Baldor?

For over 80 years, Baldor has been dedicated to providing customers with the best value in energy-efficient industrial electric motors and drives. To be considered as the best value supplier encompasses many things. So, when asked "Why Buy Baldor?", we like to say . . .

Baldor offers the industry's broadest line of stock motors and drives.

No one has in stock a broader range of motors and drives. Today, Baldor offers over 5,500 different stock motor and drive products that can be shipped from inventory the same day ordered.

Baldor products are available at more locations than any other brand.

Our 40 district sales offices across North America offer immediate availability of Baldor products in the U.S., Canada and Mexico. Baldor does business in more than 60 countries, across Central and South America, Europe, Australia and Asia.

Commitment to inventory.

Our distribution center in Fort Smith, Arkansas and our North American district warehouses contain over \$90 million of stock product inventory for immediate shipment.

Matched Performance™.

This Baldor exclusive provides lab-tested performance data on Baldor products to help customers quickly and easily match the right motor and control to get precisely the drive they need.

Made in the USA.

All Baldor motors are manufactured in one of our seven motor plants - all located in the U.S.A. FORTUNE® magazine named Baldor as one of the "100 Best Companies to Work for in America" for two straight years (1998-1999).

Industry's shortest lead times/ Flexible manufacturing.

Baldor has the industry's shortest lead times on custom motors and controls — as short as three weeks. Our unique FLEX FLOW™ manufacturing process lets us produce any order for any quantity.

Innovative new products.

Industry-leading new products like the Baldor SmartMotor®, and Stainless Washdown motors, combined with product improvements like motors wound with ISR® wire, and new Exxon POLYREX®EM grease, keep Baldor out in front of the competition.



Baldor Vector Drives in a brick plant in Australia

Energy-efficiency leader.

We began improving the efficiency of our motors as early as the 1920's, long before others were even talking about it. Today, our expansive line of Super-E® premium-efficient motors, from 1 through 800 HP, offers customers the very best in energy savings.

Investing in training and education.

No one in the industry invests more toward the training of employees, sales people and customers. The result is more knowledgeable and confident sales people and employees, as well as factory trained customers capable of applying the right Baldor motor and drive.

Industry's best information.

Only Baldor offers catalogs, a CD-ROM catalog and a website (www.baldor.com) with many features and helpful information. A powerful and fast product specification search engine helps you quickly find the products you need.

Baldor—to be the "best value" company.

Our entire company is focused on providing the best value to our customers, with emphasis on increasing quality and service, while reducing cost and time.

The best value in Inverter and Vector motors, too.

Years ago, when Baldor began making Inverter and Vector Drive motors, we spent a lot of time in the field. We talked in depth with plant maintenance and design engineers. We asked about tough applications like pulp and paper manufacturing, printing and automotive dyno test stands. We took the opportunity to learn in great detail what capabilities and characteristics people like and need. And most important, learned what not to do.

One of the frequent suggestions was the need for a motor with an outstanding insulation system to hold up to the PWM wave forms of adjustable speed controls. Our use of ISR® (Inverter Spike Resistant®) magnet wire, Class H insulation with Class F (or lower) temperature rise, and our new Exxon POLYREX®EM grease all result in a more reliable and longer lasting motor.

Today, Baldor makes tough, reliable motors from 1/50 to over 1000 Hp for many different applications. And we continue to listen and follow through on what customers want. That's why you can count on Baldor for superior value.

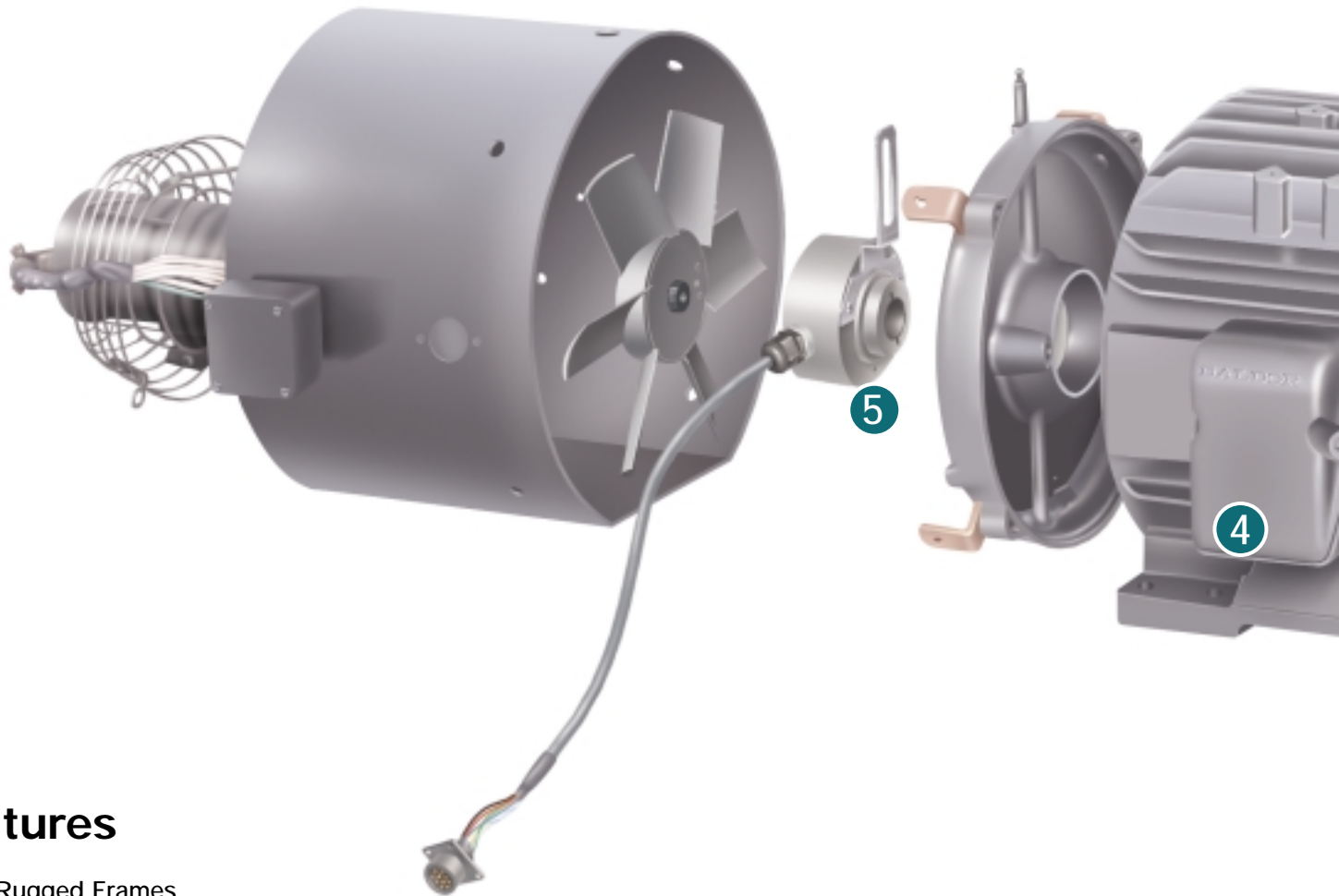
Baldor Inverter Drive® and Vector Drive® motors feature:

- The widest variety of definite-purpose Inverter and Vector Drive motors available from stock. Motors are available in a wide range of horsepower, speeds, and enclosures for specific environments.
- Standard enclosures are available for many applications. Washdown and Paint-Free ratings for applications with high pressure cleaning and caustic solutions, plus Explosion-Proof ratings for use in hazardous locations.
- Premium efficiency designs increase energy savings, lower temperature rise, and increase motor life.
- Baldor's integral horsepower designs feature cast iron construction for extra durability.
- Exxon POLYREX®EM grease is used to provide longer life at high temperatures. This new grease is also more moisture-resistant than other polyurea greases.



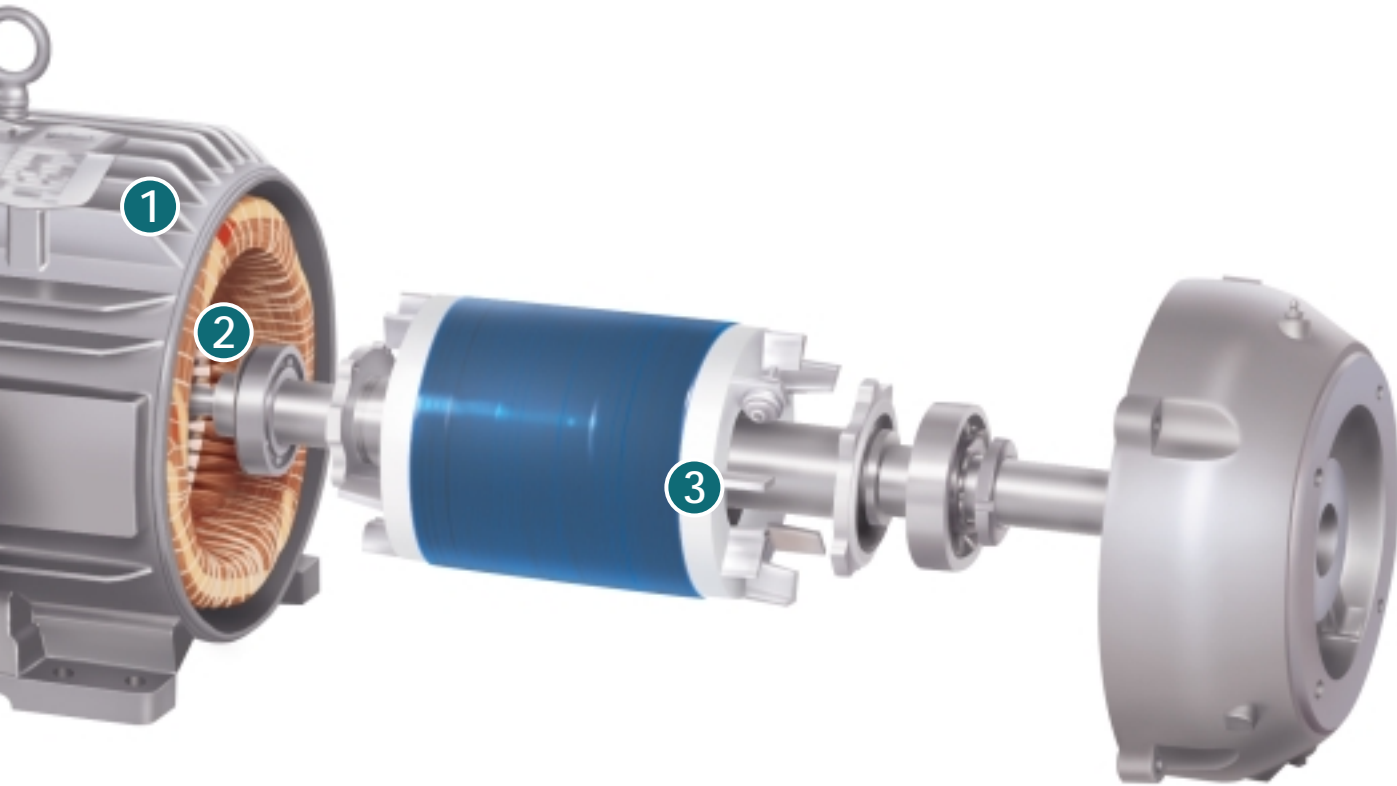
- Baldor Inverter Drive and Vector Drive motors are designed for adjustable speed applications where up to a 1000:1 constant torque speed range may be required.
- Totally-Enclosed Non-Ventilated (TENV) and Totally-Enclosed Blower-Cooled (TEBC) motors are designed and tested for use on adjustable speed controls to ensure maximum performance and adequate cooling over a wide speed range.
- Baldor offers a wide range of Explosion-Proof Inverter Drive Motors, approved for use in hazardous locations with Baldor Series 15H Inverters, as well as, inverters manufactured by other companies.
- Low inertia, induction servo motors are available for use with inverters and vector controls where motor dynamics and high performance are critical.
- Baldor Inverter Drive and Vector Drive motors meet NEMA MG1-1998, Part 31 requirements.
- Matched Performance™ curves are available to show the amount of torque available at various speeds from a given motor and control.
- Choice of all popular enclosures, voltages, and frequency as custom orders with Baldor's three-week lead times.

There are many other advantages of choosing Baldor Inverter Drive and Vector Drive motors. You'll find them on the following pages - as well as all the specs you need to make the right decision for your application.



Features

- 1** Rugged Frames
 - Cast iron construction for rugged, heavy industrial applications
 - Dual mounting holes for ease of adaptation
 - Convertible from F-1 to F-2
 - NEMA dimensions standard, IEC metric optional
 - Choice of TENV, TEBC, or Explosion-Proof TEFC enclosures
 - Inverter Drive motors with washdown enclosure available built with steel bands with painted or Paint-Free construction
 - TEBC cooling blower is a Baldor industrial motor with cast iron endplates built to Chemical Processing standards
- 2** Premium-efficiency windings
 - Low energy usage and ability to utilize lower drive current ratings
 - Standard Baldor ISR® (Inverter Spike Resistant) copper magnet wire
 - Non-hygroscopic, Class H insulation system allows windings to withstand higher temperatures to extend motor life
 - Low-loss electrical steel
- 3** High strength rotor and shaft assembly
 - High pressure die cast aluminum rotors through 449T frame, fabricated copper bar rotors 5007L frame and up
 - Operates throughout allowable speed range (including above base speed) below the 1st critical speed by at least 15% margin
 - Precision dynamic balancing



- 4** Easy to connect
- Diagonally split, oversize conduit box is rotatable in 90 degree increments through 360 degrees - standard on all Baldor cast iron frames - and is easily convertible to F-2 mounting (cast iron frames)
 - Provision for grounding is included in the conduit box
 - Overload sensing thermostat leads are provided in the main conduit box
 - An auxiliary conduit box is provided for the cooling blower motor on TEBC motors
 - Encoder connections on Vector Drive motors are with a twist-lock connector with the mating plug supplied. Pre-made cable assemblies are available in several lengths
- 5** Rugged industrial encoders on Vector Drive motors:
- 1024 PPR optical encoder standard on Vector Drive motors - HS25 size through 215TC, HS35 size 254TC - up
 - Encoders mount directly on the motor shaft, eliminating the coupling
 - Inverter Drive motors are encoder-ready for stocked encoder kits
 - Encoder kits are stocked allowing the mounting of optical encoders and magnetic pulse generators from Avtron, NorthStar (LakeShore), Dynapar and BEI

Industrial quality Baldor Inverter Drive® and Vector Drive® Motors are in stock thru 500 Hp and ready for immediate shipment.

Baldor's broad line of adjustable speed A.C. motors are stocked in over 40 world-wide warehouses and in our Fort Smith distribution center. Same day shipping is available on both Inverter Drive® and Vector Drive® Motors, as well as over 5500 other products. For motors or drives, Baldor products are the best value.



Baldor vector drive on a blown film extruder.

Electrical Design Characteristics (for all configurations)

Specification	Description	Frames	
		56C-447T	449T-5810
Voltage	230,460 or 575 volts	S	S
	380, 415 volts - 50 Hz	S	S
Frequency	60 Hz standard, 50 Hz optional	S	S
Service Factor	1.0 standard	S	S
Ratings	Nema Design B	S	S
Duty Cycle	Continuous duty	S	S
	Special duty cycles	O	O
Ambient Temperature	40°C ambient temperature	S	S
	Higher or lower ambient temperature	O	O
Temperature Rise	Class F rise at 1.0 rated load	S	S
Laminations	Low-loss electrical grade steel	S	
	Low-loss electrical grade steel, C-5 core plate		S
Windings	Class H+ (200°C) ISR (Inverter Spike Resistant®) copper magnet wire	S	S
Insulation Class	Class H+, Non-hygroscopic varnish	S	
	Class H, Non-hygroscopic epoxy VPI		S
End Turn Bracing	Surge rings laced to end-turns and VPI epoxy impregnated for structural integrity		S
Stator Insulation	Nomex Class H slot liner	S	S
Phase Insulation	Woven Class H glass phase insulation	S	S
Lead Material	Non-wicking cross-linked polyethylene	S	S
Insulation System	Meets NEMA Standards MG 1 - 1998, Part 31	S	S
Thermal Protection	Winding thermostats	S	S
Space Heaters	120 volt standard, other voltages optional	O	O
Feedback Devices	1024 PPR electrically isolated BEI optical encoder standard on vector drive motors (Other PPR available)	S	S
	NorthStar (LakeShore) or Avtron pulse generators available	O	O
Testing	Short commercial test (no-load amps, speed, balance and hi-pot test per NEMA MG-1)	S	
	Standard test supplied with motor (Balance test, winding resistance, no load, full load, amps and speed, power factor, torque and hi-pot test per NEMA MG-1)		S
	Heat run and complete efficiency testing at temperature	O	O
	Either of above tests as witnessed	O	O
Approvals	CSA recognized components through 449T (File LR2262); 5000 and 5800 TEFC frames through 800 Hp, 4 pole and up to 600 volts (File LR 36841-7)	S	S

Note: Specifications and Dimensions are subject to change without notice, please contact Baldor for certified information.
 s= standard, o= optional.

Inverter Drive® and Vector Drive® Motors (Non-Explosion-Proof)

Mechanical Design Characteristics (TENV & TEBC)

Specification	Description	Frames						
		56C	143T-215T	254T-365T	404T-447T	449T	5007L-5011L	5810
Nameplate	Includes base volts and frequency, correction diagram, blower rating (volts, hertz, phase, and amps), maximum motor speed, rotor inertia, and magnetization current	S	S	S	S	S	S	S
Frame Dimensions	NEMA	S	S	S	S	S	S	S
Frame Construction	Steel band	S						
	Cast iron		S	S	S	S	S	S
Multiple Mounting Holes in Base	Multiple mounting holes standard	S	S	S	S	S	S	S
Endplates	Die cast aluminum with steel bearing inserts	S						
	Cast iron		S	S	S	S	S	S
Face Mounting	Horizontal	O	O	O	O	O	S	S
	C-Face (standard on stock motors 56C-449TC)	S	S	S	O	O	O	O
	D-Flange	O	O	O	O	O	O	O
Conduit Box & Cover	Die cast aluminum	S						
	Cast iron		S	S	S	S	S	S
Ground Provisions	Inside conduit box for convenience	S	S	S	S	S	S	S
Lifting Provisions	Eyebolt in frame	S	S	S	S			
	Integrally-cast lifting lugs					S	S	S
Enclosure	Totally-enclosed non-vented (TENV)	O	S	S	O	O	O	O
	Totally-enclosed blower-cooled (TEBC)		S	S	S	S	S	S
	Totally-enclosed fan-cooled (TEFC)	O	O	O	O	O	O	O
Cooling Fan	Non-sparking, glass-filled polypropylene	S	S	S	S	S	S	S
Rotor Construction	Special high pressure aluminum die cast with low loss electrical steel and special slot configuration	S	S	S	S	S		
	Fabricated copper-bar construction						S	S
Balance	Dynamically balanced better than NEMA MG1-1998 specifications	S	S	S	S	S	S	S
Shaft Material	C1035 high strength steel	S	S					
	C1137 high strength steel			S	S			
	1045 high strength steel					S	S	
	4140 high strength steel							S
Paint	Grey lacquer over primer coat	S	S	S	S	S	S	S
Bearings	Premium grade, ball bearings, double shielded	S	S					
	Premium grade, ball bearings, open w/ Lube Lock®			S	S	S	S	S
	Roller bearing on drive end	O	O	O	O	O	O	O
Bearing Retention	Locked bearings for universal mounting	S	S	S	S	S	S	S
Bearing Lubrication	Exxon Mobil POLYREX®EM	S	S	S	S	S	S	S
Grease Provisions	Regreasable without removal of fan cover	S	S	S	S	S	S	S
Limited Warranty	18 months-motor only							
	24 months when used with Baldor control	S	S	S	S	S	S	S

s= standard, o= optional

Inverter Drive® and Vector Drive® Motors



Totally-Enclosed Non-Vented (TENV)

3Hp TENV Inverter Drive Motor Catalog # IDNM3661T



Totally-Enclosed Blower-Cooled (TEBC)

3Hp TEBC Vector Drive Motor Catalog # ZDM3661T

Baldor Inverter Drive® and Vector Drive® motors are suited for operation on conveyors, pumps, fans, metal processing, compressors, test stands, and material handling equipment. These motors are designed for adjustable speed applications where up to 1000:1 constant torque speed range may be required.

Performance Data 230/460 Volt Ratings-TENV Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER		VECTOR		460 V AMPS	OUTPUT TORQUE LB-FT				% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW				CATALOG NO.	"C" DIM.	CATALOG NO.	"C" DIM.		F.L.	F.L.	L.R.	B.D.				DE	ODE
0.33	0.25	1725	6000	56C	IDNM3534	12.79	-	-	0.55	1.0	3.4	3.8	76.0	0.771	29	6205	6203	
0.50	0.37	1725	6000	56C	IDNM3538	12.79	-	-	0.8	1.5	5.2	6.5	75.5	0.949	32	6205	6203	
0.75	0.56	1725	6000	56C	IDNM3542	12.79	-	-	1.1	2.3	6.5	8.3	80.0	0.119	34	6205	6203	
1	0.75	1725	6000	143TC	IDNM3581T	13.10	ZDNM3581T	13.52	1.6	3.0	12.0	15.0	81.5	0.142	53	6205	6203	
1.5	1.1	1725	6000	145TC	IDNM3584T	13.10	ZDNM3584T	13.52	2.1	4.5	14.0	17.0	82.5	0.19	62	6205	6203	
2	1.5	1740	6000	145TC	IDNM3587T	13.10	ZDNM3587T	13.52	2.7	6.0	24.0	25.0	84.0	0.208	67	6205	6203	
3	2.2	1750	3600	184TC	IDNM3661T	16.13	ZDNM3661T	16.58	4.0	9.0	22.9	37.1	88.5	0.319	108	6206	6205	
5	3.7	1760	6000	184TC	IDNM3665T	16.13	ZDNM3665T	16.58	6.6	14.9	43.0	60.0	89.5	0.37	118	6206	6205	
7.5	5.6	1760	6000	215TC	IDNM3770T	19.35	ZDNM3770T	19.77	10.1	22.5	56.0	121	91.7	1.23	176	6307	6206	
10	7.5	1760	6000	256TC	IDNM2238T	23.00	ZDNM2238T	23.54	12.8	29.8	75.0	110	92.4	2.11	281	6309	6208	
15	11.2	1765	5000	256TC	IDNM2333T	23.00	ZDNM2333T	23.54	18.5	44.6	109	195	94.1	2.10	286	6309	6208	
20	14.9	1780	4000	284TC	IDNM4102T	26.35	ZDNM4102T	26.89	24.5	59.0	105	195	93.6	4.46	476	6311	6309	

For TENV Inverter Dimensions refer to page 25, and for TENV Vector Dimensions refer to page 26.

Performance Data 230/460 Volt Ratings-TEBC Enclosure

60 HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	ENCL	INVERTER CATALOG NO.	VECTOR CATALOG NO.	460 VOLT LINE AMPS				OUTPUT TORQUE LB-FT				% EFFICIENCY LINE POWER	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW							IDLE	F.L.	F.L.	L.R.	B.D.	LB-FT	LB-FT	LB-FT				LB-FT	DE
1	0.75	1725	6000	143TC	TEBC	IDM3581T	ZDM3581T	0.81	1.4	3.0	10.0	14.5	85.5	0.142	56	6205	6203			
1	0.75	1150	4000	145TC	TEBC	IDM3582T	ZDM3582T	1.08	1.7	4.5	14.0	15.5	82.5	0.19	67	6205	6203			
1.5	1.1	1725	6000	143TC	TEBC	IDM3584T	ZDM3584T	1.16	2.1	4.5	14.0	22.0	87.5	0.166	59	6205	6203			
1.5	1.1	1160	4000	182TC	TEBC	IDM3667T	ZDM3667T	1.8	2.6	6.8	12.0	18.5	86.5	0.38	114	6206	6205			
2	1.5	1725	6000	145TC	TEBC	IDM3587T	ZDM3587T	1.2	2.5	6.0	21.0	24.0	86.5	0.208	66	6205	6203			
2	1.5	1160	4000	184TC	TEBC	IDM3664T	ZDM3664T	2.5	3.6	9.0	15.4	29.0	87.5	0.38	124	6206	6205			
3	2.2	1760	6000	182TC	TEBC	IDM3661T	ZDM3661T	2.2	4.0	9.0	22.0	31.0	89.5	0.26	108	6206	6205			
3	2.2	1160	4000	213TC	TEBC	IDM3764T	ZDM3764T	3.4	5.0	13.5	28.0	49.0	88.5	0.734	172	6307	6206			
5	3.7	1760	6000	184TC	TEBC	IDM3665T	ZDM3665T	3.4	6.5	15.0	32.0	50.0	90.2	0.38	126	6206	6205			
5	3.7	1160	6000	215TC	TEBC	IDM3768T	ZDM3768T	4.8	7.7	22.5	42.0	65.0	89.5	1.05	200	6307	6206			
7.5	5.6	1760	6000	213TC	TEBC	IDM3770T	ZDM3770T	4.6	9.8	22.5	45.0	72.0	91.0	0.734	176	6307	6206			
7.5	5.6	1180	4000	254TC	TEBC	IDM2276T	ZDM2276T	5.64	10.5	33.4	65.4	125	91.7		286	6309	6208			
10	7.5	1760	6000	215TC	TEBC	IDM3774T	ZDM3774T	5.0	12.5	30.0	56.0	121	91.7	1.23	219	6307	6206			
10	7.5	1180	2400	256TC	TEBC	IDM2332T	ZDM2332T	7.35	14.0	44.5	85.3	154	91.7		328	6309	6208			
15	11.2	1765	4000	254TC	TEBC	IDM2333T	ZDM2333T	8.33	18.5	44.6	79.1	165	92.4	1.57	255	6309	6208			
15	11.2	1170	2400	284TC	TEBC	IDM4100T	ZDM4100T	8.39	18.7	66.7	198	209	92.4		422	6311	6309			
20	14.9	1765	4000	256TC	TEBC	IDM2334T	ZDM2334T	9.79	24.0	59.5	116	199	93.0	2.1	286	6309	6208			
20	14.9	1170	3600	286TC	TEBC	IDM4102T	ZDM4102T	10.12	25.0	89.3	278	272	92.4	7.36	451	6311	6309			
25	18.7	1780	4000	284TC	TEBC	IDM4103T	ZDM4103T	11.9	30.5	74.2	125	238	93.6	3.66	432	6311	6309			
25	18.7	1180	2400	324TC	TEBC	IDM4111T	ZDM4111T	12.6	32.0	111	292	323	93	9.21	537	6312	6311			
30	22.4	1780	4000	286TC	TEBC	IDM4104T	ZDM4104T	14.5	36.0	90.0	143	256	94.1	4.46	467	6311	6309			
30	22.4	1180	3600	326TC	TEBC	IDM4117T	ZDM4117T	16.0	38.0	134	359	416	93.0	10.4	578	6312	6311			
40	30	1780	4000	324TC	TEBC	IDM4110T	ZDM4110T	16.01	47.0	118	207	385	94.5	7.46	578	6312	6311			
40	30	1185	3600	364TC	TEBC	IDM4308T	ZDM4308T	19.14	49.0	177	270	520	94.1	18.2	767	6313	6312			
50	37	1780	4000	326TC	TEBC	IDM4115T	ZDM4115T	19.13	57.0	148	290	451	94.5	8.26	686	6312	6311			
50	37	1185	3600	365TC	TEBC	IDM4312T	ZDM4312T	24.0	61.0	221	379	700	94.1	21.1	816	6313	6312			
60	45	1780	3600	364TC	TEBC	IDM4314T	ZDM4314T	23.5	69.0	177	278	556	95.0	11.7	808	6313	6312			
60	45	1185	2800	405TC	TEBC	IDM4403T	ZDM4403T	25.59	71.0	265	465	810	94.5	36	1196	6316	6313			
75	56	1780	3600	365TC	TEBC	IDM4316T	ZDM4316T	26.3	84.0	222	318	673	95.4	14.4	842	6313	6312			
75	56	1185	2800	404TC	TEBC	IDM4404T	ZDM4404T	32.4	88.0	331	514	877	95.0	38.9	1172	6316	6313			
100	75	1780	2800	404TC	TEBC	IDM4400T-4	ZDM4400T-4	34.8	112	294	455	1055	95.4	29.97	1232	6316	6313			
100	75	1180	2200	444TC	TEBC	IDM4409T-4	ZDM4409T-4	44.0	120	445	528	1200	95.4	58.8	1672	6319	6313			
125	93	1780	2200	444TC	TEBC	IDM4410T-4	ZDM4410T-4	43.0	143	368	475	1077	95.4	28.8	1522	6319	6313			
150	112	1780	2200	445TC	TEBC	IDM4406T-4	ZDM4406T-4	47.8	167	442	623	1302	95.8	36.5	1630	6319	6314			
200	149	1780	2200	447TC	TEBC	IDM4407T-4	ZDM4407T-4	65.0	225	588	966	1915	96.2	55.8	1904	6319	6314			
250	187	1780	2400	449TC	TEBC	-	ZDM4408T-4	84.9	276	740	832	1774	95.8	77.0	2917	6319	6314			
300	224	1785	2400	449TC	TEBC	-	ZDM44304T-4	90.2	333	883	1393	2630	95.8	91.0	2292	6319	6314			
350	261	1785	2400	449TC	TEBC	-	ZDM44354T-4	97.0	388	1032	1640	3450	95.8	95.0	2390	6319	6314			
400	298	1785	1800	5007L	TEBC	-	ZDM50404L-4	97.0	432	1172	1047	2518	96.2	194	4275	6322	6222			
450	336	1790	1800	5007L	TEBC	-	ZDM50454L-4	117	492	1320	1221	2988	96.5	209	4786	6322	6222			
500	373	1790	1800	5009L	TEBC	-	ZDM50504L-4	130	540	1465	1394	3388	96.2	243	4786	6322	6222			

575 Volt Inverter Drive® and Vector Drive® Motors

Baldor Inverter Drive® and Vector Drive® motors are suited for operation on conveyors, pumps, fans, metal processing, compressors, test stands, and material handling equipment. These motors are designed for adjustable speed applications where up to 1000:1 constant torque speed range may be required.



2Hp TEFC Vector Drive Motor Catalog # ZDM3587T-5

Performance Data 575 Volt Ratings - TEBC Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	ENCL	INVERTER CATALOG NO.	VECTOR CATALOG NO.	460 VOLT LINE AMPS		OUTPUT TORQUE LB-FT			% EFFICIENCY LINE POWER	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW							IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
1	0.75	1750	6000	143TC	TEBC	IDM3581T-5	ZDM3581T-5	0.65	1.1	3.0	10.0	14.5	85.5	0.142	55	6205	6203
1.5	1.1	1750	6000	145TC	TEBC	IDM3584T-5	ZDM3584T-5	0.93	1.7	4.5	14.0	22.0	87.5	0.166	59	6205	6203
2	1.5	1750	6000	145TC	TEBC	IDM3587T-5	ZDM3587T-5	0.96	2.0	6.0	21.0	24.0	86.5	0.208	66	6205	6203
3	2.2	1760	6000	182TC	TEBC	IDM3661T-5	ZDM3661T-5	1.8	3.2	9.0	22.0	31.0	89.5	0.26	108	6206	6205
5	3.7	1750	6000	184TC	TEBC	IDM3665T-5	ZDM3665T-5	2.7	5.2	15.0	32.0	50.0	90.2	0.37	126	6206	6205
7.5	5.6	1760	6000	213TC	TEBC	IDM3770T-5	ZDM3770T-5	3.9	7.8	22.4	39.0	69.9	90.2	0.84	176	6307	6206
10	7.5	1760	6000	215TC	TEBC	IDM3774T-5	ZDM3774T-5	4.4	10.0	30.0	56.0	121	91.7	1.23	219	6307	6206
15	11.2	1760	4000	254TC	TEBC	IDM2333T-5	ZDM2333T-5	6.6	14.8	44.5	79.0	165	92.4	1.57	255	6309	6208
20	14.9	1765	4000	256TC	TEBC	IDM2334T-5	ZDM2334T-5	7.6	19.0	59.0	114	195	93.0	2.1	286	6309	6208
25	18.7	1780	4000	286TC	TEBC	IDM4103T-5	-	9.5	23.9	74.2	125	238	93.6	3.66	428	6311	6309
30	22.4	1780	4000	286TC	TEBC	IDM4104T-5	-	9.68	29.0	90.0	143	256	94.1	4.46	437	6311	6309
40	30	1780	4000	324TC	TEBC	IDM4110T-5	-	12.81	37.0	118	207	385	94.5	7.46	578	6312	6311
50	37	1780	4000	326TC	TEBC	IDM4115T-5	-	15.9	46.0	148	297	460	94.5	8.26	676	6312	6311
60	45	1780	4000	364TC	TEBC	IDM4314T-5	-	19.2	55.0	177	303	584	94.5	11.7	808	6313	6312
75	56	1780	4000	365TC	TEBC	IDM4316T-5	-	20.8	67.4	222	315	667	95.4	14.4	842	6313	6312
100	75	1780	2800	404TC	TEBC	IDM4400T-5	-	27.3	89.0	294	450	1040	95.4	29.97	1239	6316	6313
125	93	1780	2200	444TC	TEBC	IDM4410T-5	-	38.0	116	368	499	1127	95.4	28.8	1495	6319	6314
150	112	1780	2200	445TC	TEBC	IDM4406T-5	-	40.7	134	442	645	1343	95.8	36.0	1696	6319	6314

50 Hertz Vector Drive® Motors



3Hp TEBC Vector Drive Motor Catalog # ZDM3661T

Performance Data 415 Volt Ratings - 50 Hz TENV & TEBC Enclosures

60HZ		RPM		IEC FRAME	ENCL	VECTOR CATALOG NO.	415 VOLT LINE AMPS		OUTPUT TORQUE LB-FT			% EFFICIENCY LINE POWER	INERTIA kg cm ²	APPROX. WEIGHT kg	BEARINGS	
HP	kW	BASE	MAX				IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
1	0.75	1500	6000	D80-B5	TENV	ZDNMM3581		1.7					69	25	6203	6205
2	1.5	1500	6000	D90-B5	TENV	ZDNMM3669		3.0					110	39	6205	6206
3	2.2	1500	6000	D100-B5	TENV	ZDNMM3661	2.9	4.7	10.7	30.0	47.0	89.5	156	46	6205	6206
5	3.7	1500	6000	112M	TEBC	ZDMM3665	4.0	7.1	18.0	40.0	63.0	89.5	156	62	6205	6206
5	3.7	1500	6000	112M	TEBC	ZDMM3665D	4.0	7.1	18.0	40.0	63.0	89.5	156	65	6205	6206
7.5	5.5	1500	6000	132M	TEBC	ZDMM3770	5.7	11.4	26.8	45.0	94.0	89.5	308	92	6206	6208
7.5	5.5	1500	6000	132M	TEBC	ZDMM3770D	4.4	11.4	27.0	98.0	113	89.5	308	96	6206	6208
10	7.5	1500	6000	132M	TEBC	ZDMM3774	6.7	14.4	36.6	100	126	90.2	440	98	6206	6208
10	7.5	1500	6000	132M	TEBC	ZDMM3774D	6.7	14.4	36.6	100	126	90.2	440	102	6206	6208
15	11	1500	4000	160M	TEBC	ZDMM2333	10.6	21.0	54.0	130	196	92.4	878	127	6208	6309
15	11	1500	4000	160M	TEBC	ZDMM2333D	10.6	21.0	54.0	130	196	92.4	878	133	6208	6309
20	15	1500	4000	160L	TEBC	ZDMM2334	10.6	27.0	72.5	127	226	92.4	951	141		
20	15	1500	4000	160L	TEBC	ZDMM2334D	10.6	27.0	72.5	127	226	91.7	951		6208	6309
25	18.7	1500	4000	180M	TEBC	ZDMM4103	11.6	33.5	90.5	117	232	91.7	1862	187	6309	6311
30	22.4	1500	4000	180L	TEBC	ZDMM4104		41.0					1955	216	6311	6312
40	30	1500	4000	200L	TEBC	ZDMM4110		53.0					3270	250		
50	37	1500	4000	225S	TEBC	ZDMM4115		67.0					4572	306	6312	6313
60	45	1500	4000	225M	TEBC	ZDMM4314		78.0					4888	362		
75	56	1500	4000	250S	TEBC	ZDMM4316		101					8546	465		
100	75	1500	3000	250M	TEBC	ZDMM4400		128					11399	537		

Contact Baldor for current information on the above motors.

Inverter Drive® and Vector Drive® Washdown Duty Motors

Baldor's A.C. Inverter Drive® and Vector Drive® Washdown Duty Motors range from 1 to 10 Hp and are suitable for use on conveyors, pumps, and other equipment in the food processing industry. Specifically designed for high pressure washdown applications.



1.5Hp TENV Washdown Vector Drive Motor
 Catalog # ZDWNM3554T

Mechanical Design Characteristics

Specification	Description	Frames		
		56	143T 215T	254T 256TC
Nameplate	Nameplate and fasteners stainless steel. Includes base volts and frequency, connection diagrams, blower rating (volts, hertz, phase, and amps), maximum motor speed, rotor inertia and magnetization current	S	S	S
Frame Dimensions	NEMA	S	S	S
Frame Construction	Steel band	S	S	S
	Stainless steel band (Paint Free only)	S	S	S
Multiple Mounting Holes in Base	Multiple mounting holes standard	S	S	S
Endplates	Die cast aluminum with steel bearing inserts	S	S	S
	Treated die cast aluminum with steel bearing inserts (Paint Free only)	S	S	S
Face Mounting	Horizontal	O	O	O
	C-Face (standard on stock motors 56C-256TC)	S	S	S
	D-Flange	O	O	O
Conduit Box & Cover	Die cast aluminum	S		
	Treated die cast aluminum (Paint Free only)		S	S
Gaskets & Sealing	Neoprene gaskets prevent entrance of moisture between the conduit box and frame as well as the lid and conduit box. Joint between the endplates and motor frame is sealed to prevent water entry	S	S	S
		S	S	S
Ground Provisions	Inside conduit box for convenience	S	S	S
Lifting Provisions	Eyebolt in frame	S	S	S
Cooling Fan	Non-sparking, glass-filled polypropylene	S	S	S
Rotor Construction	Special high pressure aluminum die cast with low loss electrical steel and special slot configuration. Coated with 2-part epoxy for resistance to corrosion	S	S	S
		S	S	S
Balance	Dynamically balanced better than NEMA	S	S	S
	MG1-1998 specifications	S	S	S
Shaft Material	Entire shaft is made of 300 series stainless steel for prevention of rust and corrosion	S	S	S
Shaft Seals	A contact lip seal and V-ring type Forsheda rotating seal are provided on the drive-end shaft to prevent entrance of contamination into the bearings	S	S	S
Drains	Multiple drain hole locations with removable plugs to maximize drainage & minimize water entry	S	S	S
Paint	FDA approved two-part epoxy coated inside and outside to extend motor life and prevent internal corrosion	S	S	S
	No internal or external paint (Paint Free only)	S	S	S
Bearings	Premium grade ball bearings, double shielded	S	S	
	Premium grade ball bearings, open with Lube Lock			S
	Roller bearing on drive end	O	O	O
Bearing Retention	Locked bearings for universal mounting	S	S	S
Bearing Lubrication	Exxon Mobil POLYREX® EM for use in wet environments with resistance to wash-out	S	S	S
Grease Provisions	Regreasable with addition of grease fittings	S	S	S
Limited Warranty	18 months - motors only; 24 months when used with Baldor control	S	S	S

Note: Specifications and Dimensions are subject to change without notice, please contact Baldor for certified information.
 s= standard, o= optional

Inverter Drive® and Vector Drive® Washdown Duty Motors Performance Data 230/460 Volt Ratings-TENV Enclosure

60 HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	ENCL	INVERTER CATALOG NO.	VECTOR CATALOG NO.	460 VOLT LINE AMPS		OUTPUT TORQUE LB-FT			% EFFICIENCY LINE POWER	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW							IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
1	0.75	1750	6000	143TC	TENV	IDWNM3546T	ZDWNM3546T	0.81	1.4	3.0	10.0	14.5	85.5	0.14	40	6205	6203
1.5	1.1	1750	6000	145TC	TENV	IDWNM3554T	ZDWNM3554T	1.2	2.1	4.5	19.8	20.5	87.5	0.21	49	6205	6203
2	1.5	1725	6000	182TC	TENV	IDWNM3609T	ZDWNM3609T	1.7	2.9	6.0	25.0	30.0	84.0	0.26	68	6206	6205
3	2.2	1750	3600	184TC	TENV	IDWNM3611T	ZDWNM3611T	1.8	4.0	9.0	22.0	32.0	88.5	0.319	79	6206	6205
5	3.7	1760	6000	213TC	TENV	IDWNM3707T	ZDWNM3707T	3.4	6.7	14.9	48.0	52.0	89.5	0.74	122	6307	6206
7.5	5.6	1765	4000	254TC	TENV	IDWNM22937T	ZDWNM22937T	4.0	9.1	22.5	48.6	86.0	91.0	1.75	242	6309	6208
10	7.5	1765	4000	254TC	TENV	IDWNM22938T	ZDWNM22938T	4.4	12.0	30.0	58.0	114	91.7	2.45	291	6309	6208

Inverter Drive® and Vector Drive® Paint-Free Washdown Duty Motors



3Hp Paint-Free Washdown Duty Inverter Drive Motor
 Catalog # IDVSWDM3611T

Performance Data 230/460 Volt Ratings-TEFC Enclosure

60 HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	ENCL	INVERTER CATALOG NO. C-FACE		460 VOLT LINE AMPS		OUTPUT TORQUE LB-FT			% EFFICIENCY LINE POWER	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW					WITH BASE	LESS BASE	IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
0.50	0.37	1750	6000	56C	TENV	IDCSWDM3538	IDVSWDM3538	0.5	0.8	1.5	5.6	6.7	82.5	0.0949	35	6205	6203
0.75	0.56	1750	6000	56C	TEMV	IDCSWDM3542	IDVSWDM3542	0.7	1.0	2.3	8.5	9.0	78.5	0.142	39	6205	6203
1	0.75	1725	3600	56C	TENV	IDCSWDM3546	IDVSWDM3546	0.8	1.5	3.0	12.0	12.0	82.5	0.166	45	6205	6203
1	0.75	1725	6000	143TC	TENV	IDCSWDM3546T	IDVSWDM3546T	0.8	1.5	3.0	12.0	12.0	82.5	0.166	45	6205	6203
1.5	1.1	1750	4000	56C	TEBC	IDCSWDM3554	IDVSWDM3554	1.16	2.1	4.5	14.0	22.0	87.5	0.166	45	6205	6203
1.5	1.1	1750	4000	145TC	TEBC	IDCSWDM3554T	IDVSWDM3554T	1.16	2.1	4.5	14.0	22.0	87.5	0.166	45	6205	6203
2	1.5	1750	3600	56C	TEBC	IDCSWDM3558	IDVSWDM3558	1.2	2.5	6.0	21.0	24.0	86.5	0.208	55	6205	6203
2	1.5	1750	3600	145TC	TEBC	IDCSWDM3558T	IDVSWDM3558T	1.2	2.5	6.0	21.0	24.0	86.5	0.208	55	6205	6203
3	2.2	1760	6000	182TC	TEBC	IDCSWDM3611T	IDVSWDM3611T	2.2	4.1	9.0	22.0	31.0	89.5	0.26	72	6206	6205
5	3.7	1750	6000	184TC	TEBC	IDCSWDM3615T	IDVSWDM3615T	3.2	6.4	15.0	32.0	52.0	89.5	0.37	92	6206	6205
7.5	5.6	1760	6000	213TC	TEBC	IDCSWDM3710T	IDVSWDM3710T	5.7	10	22.0	67.0	79.0	86.5	0.988	136	6307	6206
10	7.5	1760	6000	215TC	TEBC	IDCSWDM3714T	IDVSWDM3714T	8.4	13	29.9	99.0	119	89.5	1.23	158	6307	6206

Inverter Drive® Explosion-Proof Motors

UL and CSA approved for use in hazardous locations. 1/2 through 2 Hp Class I, Group D, Class II, Group F & G. Temperature rating T3C (160°C). 3 Hp and larger Class I, Group D only. Temperature Code 72A (280°C). 1.0 service factor. Class F insulation. All ratings constant horsepower 60 to 90 Hz.



Mechanical Design Characteristics

Specification	Description	Frames				
		56-145T	182T-215T	254T-365T	405T	449T
Explosion-Proof Classifications	Class I, Group D, Class II, Group F & G. Temperature Code T3C (160°C) Class I, Group D only. Temperature Code T2A, (280°C)	s				
Nameplate	UL / CSA listed nameplate. Includes base volts and frequency, connection diagram	s	s	s	s	s
Frame Dimensions	NEMA	s	s	s	s	s
Frame Construction	Steel band	s				
	Cast iron		s	s	s	s
Multiple Mounting Holes in Base	Multiple mounting holes standard	s	s	s	s	s
Endplates	Die cast aluminum with steel bearing inserts	s				
	Cast iron		s	s	s	s
Face Mounting	Horizontal	o	o	o	o	o
	C-Face (standard on stock motors 56C-365TC)	s	s	s	o	o
	D-Flange	o	o	o	o	o
Conduit Box & Cover	UL approved die cast aluminum	s				
	UL approved cast Iron		s	s	s	s
Ground Provisions	Inside conduit box for convenience	s	s	s	s	s
Lifting Provisions	Eyebolt in frame	s	s	s	s	
	Integrally-cast lifting lugs					s
Enclosure	Totally-enclosed fan-cooled (TEFC)	s	s	s	s	s
Cooling Fan	Non-sparking, glass-filled polypropylene	s	s	s	s	s
Rotor Construction	Special high pressure aluminum die cast with low loss electrical steel and special slot configuration	s	s	s	s	s
Balance	Dynamically balanced better than NEMA MG1-1998 specifications	s	s	s	s	s
Shaft Material	C1035 high strength steel	s	s			
	C1137 high strength steel			s	s	
	1045 high strength steel					s
Paint	Grey lacquer over primer coat	s	s	s	s	s
Bearings	Premium grade, double shielded	s	s			
	Premium grade, open with Lube Lock			s	s	s
Bearing Retention	Locked bearings for universal mounting	s	s	s	s	s
Bearing Lubrication	Exxon Mobil POLYREX® EM	s	s	s	s	s
Grease Provisions	Regreasable without removal of fan cover	s	s	s	s	s
Limited Warranty	18 months-motor only					
	24 months when used with Baldor control	s	s	s	s	s

Note: Specifications and Dimensions are subject to change without notice, please contact Baldor for certified information.
s= standard, o= optional

A.C. Inverter Drive® Explosion-Proof Motors

Performance Data 230/460 Volt Ratings

2:1 Constant Torque 10:1 Variable Torque Ratings

60 HZ		SPEED	BASE SPEED	MAX. FRAME	"C" DIM.	INVERTER CATALOG NO.	460 VOLT LINE AMPS		OUTPUT TORQUE LB.-FT.			% EFFICIENCY LINE	WK ² LB.-FT ²	APPROX WEIGHT LBS.	BEARINGS	
HP	KW						IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
0.50	0.37	1750	2700	56C	14.30	IDXM7006 ⑧	0.5	0.8	1.5	5.6	6.7	82.5	0.09	42	6205	6203
0.75	0.56	1750	2700	56C	14.30	IDXM7010 ⑧	0.61	1.1	2.25	8.4	8.8	82.5	0.12	46	6205	6203
1	0.75	1750	2700	143TC	15.23	IDXM7014T ⑧	0.81	1.4	3.0	10.0	14.5	85.5	0.14	50	6205	6203
1.5	1.1	1750	2700	145TC	15.23	IDXM7034T ⑧	1.13	2.1	4.5	19.0	23	88.5	0.17	53	6205	6203
2	1.5	1750	2700	145TC	17.48	IDXM7037T ⑧	1.3	2.6	6.0	25.3	27.4	88.5	0.24	67	6205	6203
3	2.2	1760	2700	182TC	18.24	IDXM7142T ⑥	2.2	4.0	9.0	22.0	31.0	89.5	0.26	144	6206	6205
5	3.7	1760	2700	184TC	18.24	IDXM7144T ⑥	3.4	6.5	15.0	32.0	50.0	89.5	0.4	158	6206	6205
7.5	5.6	1760	2700	213TC	20.69	IDXM7147T ⑥	4.9	9.7	22.4	42.9	69.9	90.2	0.85	228	6307	6206
10	7.5	1760	2700	215TC	20.69	IDXM7170T ⑥	5.5	12.5	30.0	56.0	121	91.7	1.14	196	6307	6206
15	11.2	1765	2700	254TC	26.00	IDXM7054T ⑥	6.95	18.0	45.0	88.0	143	92.4	1.84	356	6309	6208
20	14.9	1765	2700	256TC	26.00	IDXM7056T ⑥	8.5	24.0	60.0	120	183	93.0	2.27	393	6309	6208
25	18.7	1780	2700	284TC	28.61	IDXM7058T ⑥	11.9	30.5	74.0	137	226	93.6	3.98	494	6311	6309
30	22.4	1780	2700	286TC	28.61	IDXM7060T ⑥	14.5	36.0	90.0	143	256	94.1	4.46	555	6311	6309
40	30.0	1780	2700	324TC	32.00	IDXM7062T ⑥	15.3	47.0	118	221	285	94.5	7.5	782	6312	6311
50	37.0	1780	2700	326TC	32.00	IDXM7064T ⑥	22.9	59.0	148	367	450	94.5	9.64	772	6312	6311
60	45.0	1780	2700	364TC	32.26	IDXM7066T ⑥	24.0	71.0	178	440	500	94.5	11.7	1006	6313	6312
75	56.0	1780	2700	405T	38.75	IDXM7068T ⑥	25.6	87.3	222	524	510	93.6	22.4	1369	6316	6313

10:1 Constant Torque and 10:1 Variable Torque Ratings

3	2.2	1760	2700	182TC	18.24	IDXM7542T ⑥	2.2	4.0	9.0	22.0	31.0	89.5	0.26	137	6206	6205
5	3.7	1760	2700	213TC	20.65	IDXM7544T ⑥	2.6	6.3	15.0	29.4	41.2	90.2	0.608	212	6307	6206
7.5	5.6	1760	2700	215TC	20.65	IDXM7547T ⑥	4.9	9.7	22.4	42.9	69.9	90.2	0.84	225	6307	6206
10	7.5	1760	2700	254TC	25.50	IDXM7570T ⑥	5.4	12.8	29.7	75.0	110	92.4	2.09	378	6309	6208
15	11.2	1765	2700	256TC	26.00	IDXM7554T ⑥	7.0	17.0	45.0	93.0	151	92.4	2.1	381	6309	6208
20	14.9	1765	2700	284TC	28.61	IDXM7556T ⑥	8.6	24.5	59.0	96.0	167	90.2	3.5	516	6311	6309
25	18.7	1780	2700	324TC	32.00	IDXM7558T ⑥	10.6	30.0	74.0	114	226	91.7	6.16	705	6312	6311
30	22.4	1780	2700	326TC	32.00	IDXM7560T ⑥		36.0				93.0	7.5	731	6312	6311
40	30.0	1780	2700	364TC	32.26	IDXM7562T ⑥	12.2	48.0	118	218	297	92.4	11.7	913	6313	6312
50	37.0	1780	2700	365TC	33.25	IDXM7564T ⑥	12.2	57.0	147	266	343	92.4	11.7	971	6313	6312
60	45.0	1780	2700	405T	38.75	IDXM7566T ⑥	17.8	69.0	177	332	425	93.6	22.4	1341	6313	6312

Shaded ratings indicate cast iron frames.

Closed Loop Explosion Proof Inverter Drive® Motors

For those applications requiring precise speed regulation or positioning, Baldor has the capability to build a custom TEFC explosion-proof motor with a UL approved feedback device allowing closed loop motor operation. The motor will be UL Listed for Class I, Group D to operate in the constant torque or variable torque speed range like the Inverter Drive® Explosion Proof motors shown above. Contact Baldor with your application requirements.

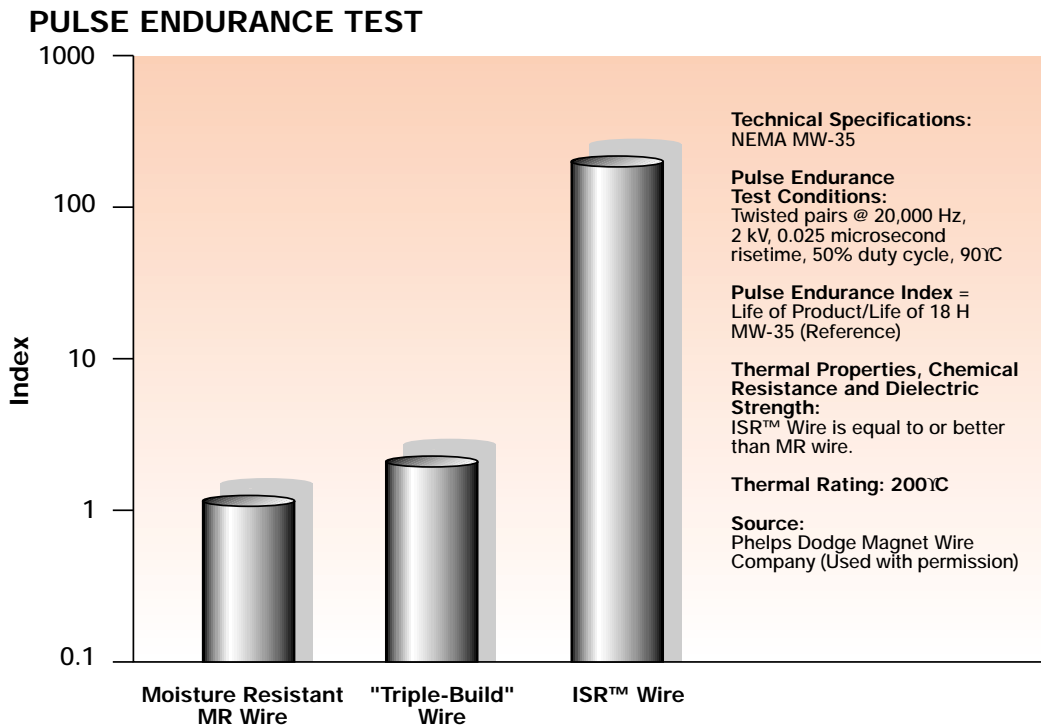
ISR® (Inverter Spike Resistant®) Wire

All 200, 230, 460, 575 volt - 60 hertz and 220, 380, 415 volt - 50 hertz three phase Baldor AC motors from 1Hp to 800 Hp are wound with ISR® (Inverter Spike Resistant) magnet wire. Baldor motors wound with ISR wire are up to 100 times more resistant to transient spikes, high frequencies, and short rise time pulses produced by inverters and vector drives. The result is a better motor with longer life, reduced downtime and better overall value.

Baldor is the first motor manufacturer to use this new wire in such a wide range of motors, just like we were the first to use type-MR moisture resistant wire across our entire line over 10 years ago.

The use of variable speed controls with AC induction motors is growing rapidly. Even if the motor you're buying today is not used with a variable speed control, there is a chance that a control may be added later. Why not plan for the future and buy the best motor that you can today — a Baldor motor wound with ISR® (Inverter Spike Resistant) wire.

Baldor Inverter Drive and Vector Drive motors are designed to be used as defined by NEMA MG-1-1993, Part 31.

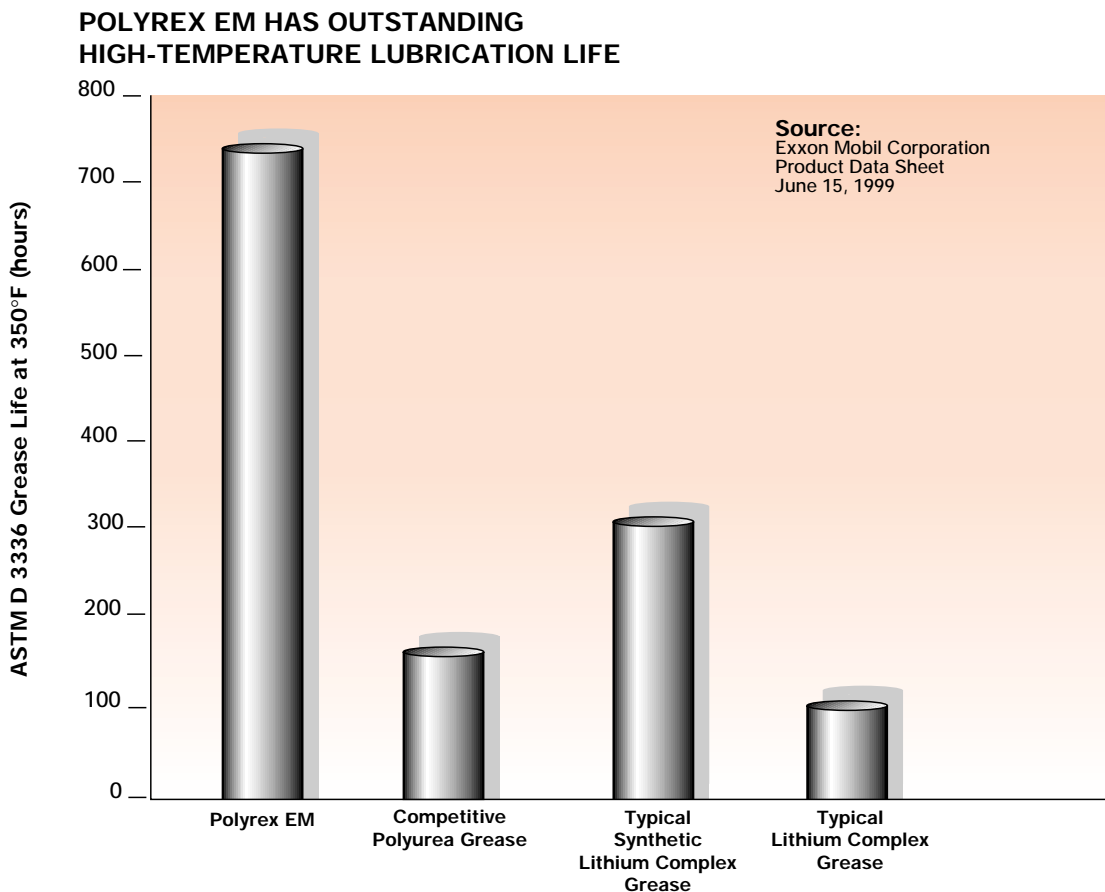


Baldor Motors use POLYREX®EM Grease for long life in extreme conditions

New Exxon POLYREX®EM grease protects motor bearings better, providing improved lubrication life, greater shear stability, and superior resistance to washout, rust, and corrosion.

It's a fact: bearing failure is the #1 mechanical reason for motor failure. So the better the grease protecting those bearings, the better the motor performs...the longer the bearings last...and the less downtime you have to endure.

Today, that better grease is Exxon's new POLYREX®EM polyurea grease - now standard on all Baldor motors. It gives a lubrication life of more than four times greater than other polyurea greases in tests up to 350°F. It exhibits greater durability when subjected to mechanical shearing forces. A specially formulated additive in the grease resists washout, rust and corrosion even when subjected to salt water conditions.



POLYREX®EM is a registered trademark of Exxon Mobil Corporation

Baldor offers a selection of feedback options.

Inverter Drive motors are available for open loop applications where no feedback is required. Baldor Inverter Drive motors can be easily upgraded; adding feedback by using an encoder kit available from stock.

Baldor's standard Vector Drive motors use an industrial quality optical encoder. This encoder is now supplied with mounting directly to the motor shaft without a coupling. This "hollow shaft" method ensures reliability, shortens overall length, and allows easy substitution with other feedback devices.

For very rugged and dirty applications such as paper mills, use of a magnetic pulse device is often preferred



Standard Vector Drive Encoder Feedback (BEI)

over an optical encoder. With Baldor's encoder mounting system, use of a magnetic pulse generator from Avtron, BEI or NorthStar (LakeShore) Technologies is a simple bolt-on installation.

Feedback Device for Vector Drive Motors*

		56C	143TC-215TC	254TC-256TC	404TC-447TC	449TC	5007L-5009L
Type	Incremental optical encoder	s	s	s	s	s	s
Connection	M.S. connector (plug & receptical supplied)	s	s	s	s	s	s
Encoder Size	H25 hollow shaft	s	s				
	H35 hollow shaft			s	s	s	s
Encoder Bearings	ABEC-7	s	s	s	s	s	s
Frequency Response	100 Kilohertz standard	s	s	s	s	s	s
Isolation	Encoder electrically isolated from motor to prevent motor noise interference	s	s	s	s	s	s
Pulses per Revolution	1024 PPR standard	s	s	s	s	s	s
Signal	Dual quadrature channels with index and compliments	s	s	s	s	s	s
Voltage	5 - 15 VDC standard	s	s	s	s	s	s

*= May be retrofitted to an Inverter Drive Motor.
s= standard.

Optional Feedback for Inverter Drive or Vector Drive Motors

Catalog No. No.	Encl	Description	Type	56C	143TC-145TC	213TC-215TC	254TC-256TC	324TC-447TC	404TC-447TC	449TC	5007L-5009L
ENC00NV-B1	TENV	HS25 BEI	Optical	s	s	s					
ENC01NV-B1	TENV	HS25 BEI	Optical				s	s	s		
ENC00NV-B3	TENV	HS25 BEI	Magnetic	s	s	s					
ENC01NV-B3	TENV	HS35 BEI	Magnetic				s	s	s		
ENC00NV-D1	TENV	HS35 Dynapar	Optical		s	s					
ENC01NV-D1	TENV	HS35 Dynapar	Optical				s				
ENC00NV-N1	TENV	HS35 NorthStar	Magnetic		s	s					
ENC01NV-N1	TENV	HS35 NorthStar	Magnetic				s				
ENC00NV-A1	TENV	M4 Avtron	Magnetic			s					
ENC01NV-A1	TENV	M4 Avtron	Magnetic				s				
ENC01BC-B1	TEBC	HS25 BEI	Optical		s	s					
ENC02BC-B2	TEBC	HS35 BEI	Optical				s	s	s		
ENC02BC-B3	TEBC	HS35 BEI	Magnetic				s	s	s		
ENC02BC-A1	TEBC	M4 Avtron	Magnetic				s	s	s		
ENC02BC-D1	TEBC	HS35 Dynapar	Optical				s	s	s		
ENC02BC-N1	TEBC	HS35 NorthStar	Magnetic				s	s	s		

Custom Inverter Drive® and Vector Drive® Motor Options

Mechanical Options

- NEMA C-Face, D-Flange or P-base
- IEC Metric Foot Mounting
B5-Face or B-14 Flange
- Custom Shaft Extensions
- Space Heaters
- Winding RTDs or Thermistors
- Bearing RTDs or Thermistors
- Oversize Ball or Roller Bearings
- Shaft Grounding Brush
- Electrically Isolated Bearings

Electrical Options

- Special Voltages
- 50 Hertz Designs
- Special Speeds
- Extended Speed Range
- Wye/Delta Winding Switching
for Extended Speed Range
- Single phase blower motors

Optional Feedback for Inverter Drive or Vector Drive Motors



Avtron M4 Magnetic Pulse Generator



Dynapar HS35 Optical Encoder



NorthStar HS35 Magnetic pulse generator



Typical feedback mounting shaft opposite pulley end

Matched Performance™ Curves

Matched Performance™ is Baldor's solution to the concern, "What kind of constant torque and constant horsepower speed range will I get with this combination of motor and motor control?" Only Baldor provides Matched Performance™ curves that go beyond the "typical performance" curves and instead provides actual laboratory dynamometer test results.

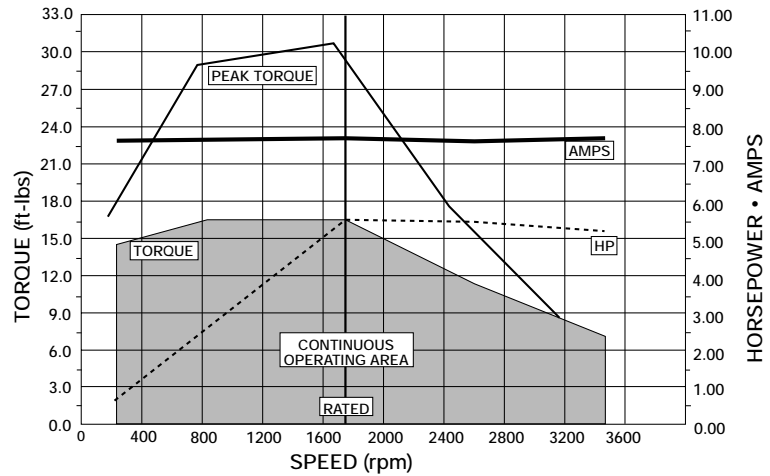
Each test is performed in Baldor's own engineering testing laboratory using advanced dynamometer equipment and digital power measurements. A typical Matched Performance™ test requires 2-4 days of continuous testing. This painstaking effort is another example of Baldor's commitment to providing customers the extra value to make our products easy to apply to your specific application needs.

These curves show the **continuous operating** constant torque speed range that can be produced without exceeding Class F temperature rise in the motor. The lower Class F rise is selected to provide long life, even when a Class H insulation system is used in Baldor Inverter Drive and Vector Drive motors.

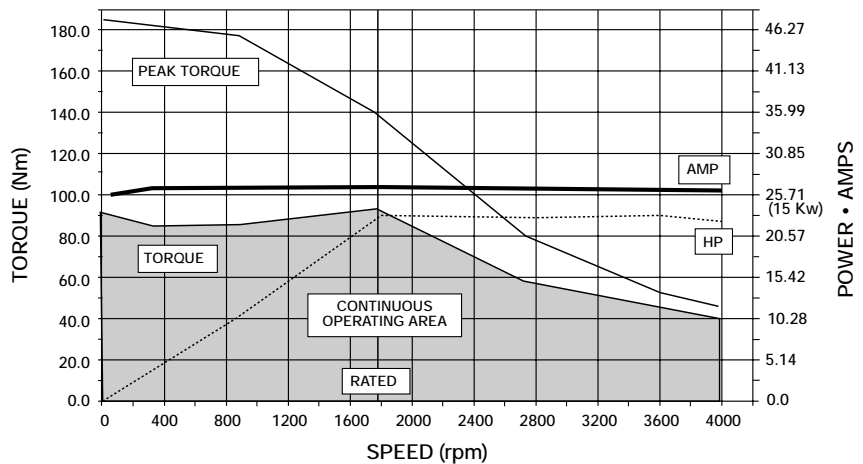
Peak Torque is the maximum amount of torque a Baldor Series 15H Inverter, Series 18H or 26M Vector Drive can produce. This may be limited by the breakdown torque of the motor or the control's current-limited peak torque. Peak torque is available for momentary overloads or acceleration and deceleration requirements.

The **horsepower** curve is simply a representation of how much power is available from the motor at any given operating speed. The horsepower curve can be used to size applications requiring constant horsepower operation.

Motor: IDM3665T - 5 Hp
Control: ID15H405-E - 5 Hp Series 15H Inverter



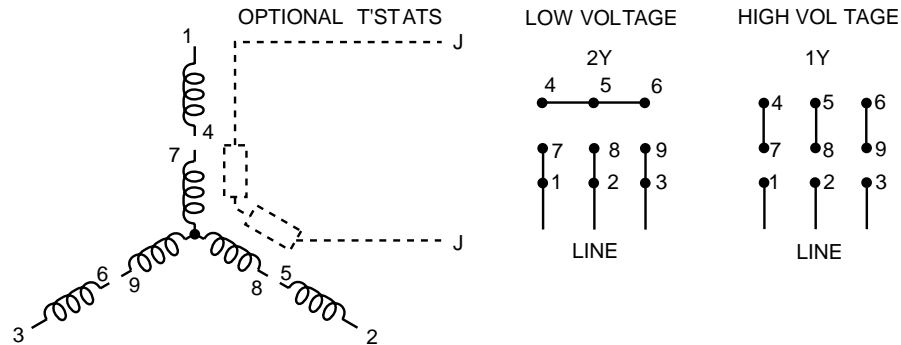
Motor: ZDM2334T - 20 Hp
Control: ZD18H420-EO - 20 Hp Series 18H Vector



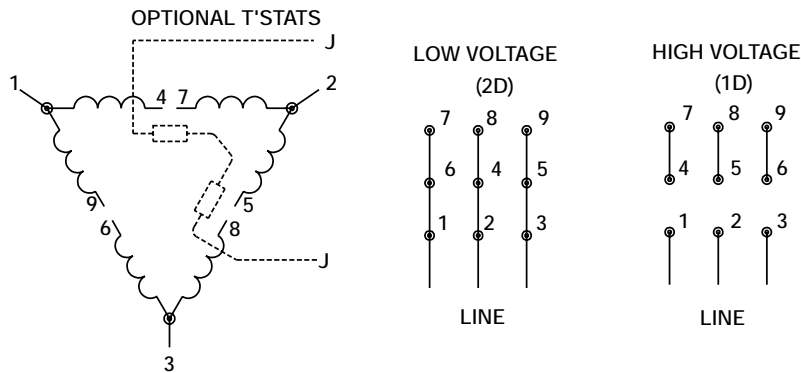
Connection Diagrams

Main Motor Power Leads

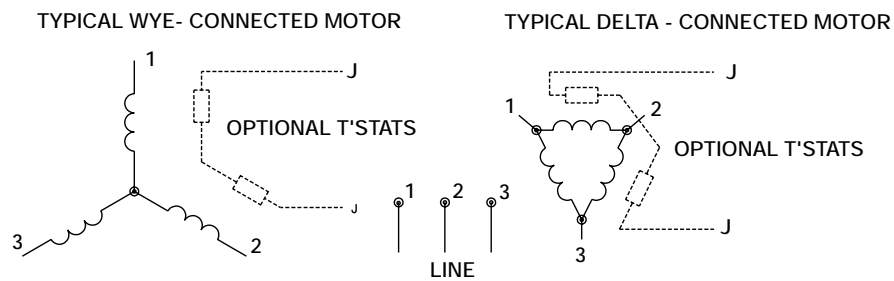
9 Lead Wye-Connected Motor



9 Lead Delta-Connected Motor



3 Lead



Notes:

1. Three lead motors may be designed as either wye-connected or delta-connected.
2. Interchange any two line leads to reverse rotation.
3. Optional thermostats are provided when specified.
4. Actual number of internal parallel circuits may vary.

TEBC Blower Motor Specifications for TEBC Inverter Drive and Vector Drive Motors

FOR TEBC INVERTER DRIVE AND VECTOR DRIVE MOTORS

MAIN MOTOR FRAME	BLOWER MOTOR SPECS					
	HP	POLES	VOLTS	PH	HZ	AMPS FULL LOAD
143/145TC	0.05	2	115/230	1	60	0.54/0.27
182/184TC	0.05	2	115/230	1	60	0.27/0.13
213/215TC	0.1	2	230/460*	3	60	0.4/0.25
254/256TC						
284/286TC			207/415	3	50	0.46/0.27
324/326TC 364/365TC						
404/405TC	0.20	2	230/460*	3	60	0.68/0.33
444/445TC			207/415	3	50	0.7/0.38
447-449TC						
5007L 5009L 5810	Consult Baldor					

Note: TENV motors do not require blower cooling.

Above blowers are standard on 230/460v stock motors.

575 volt motor ratings use a 115/230v, 1 phase blower motor

Blower motors may be changed from 3ph to 1ph using the blower kits shown below.

Blower Kits – Single Phase

Blower kits include blower motor, housing, and mounting hardware. Designed for use as spares or when wanting to change blower input voltage.

CATALOG NO.	VOLTAGE	PHASE	HZ	FRAME SIZE	APPROX. WEIGHT
BLWL05-L	115	1	50/60	143T-145T	7
BLWL06-L	115	1	50/60	182T-184T	8
BLWL07-L	115	1	50/60	213T-215T	13
BLWL09-L	115	1	50/60	254T-256T	15
BLWL10-L	115	1	50/60	284T-286T	35
BLWL12-L	115	1	50/60	324T-326T	46
BLWL14-L	115	1	50/60	364T-365T	55

Blower Kits – Three Phase

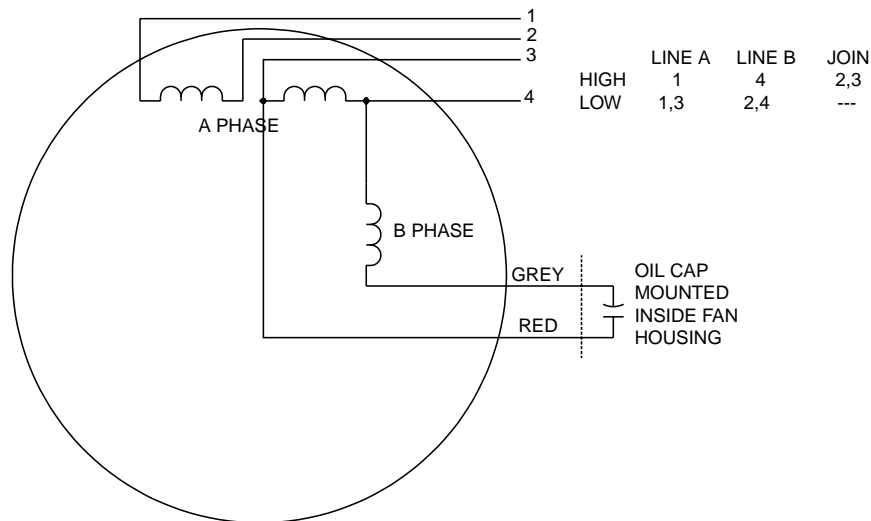
Blower Motor housing and mounting hardware for spare units or different power supplies.

CATALOG NO.	VOLTAGE	PHASE	HZ	FRAME SIZE	APPROX. WEIGHT
BLWM07-F	230/380-460	3	60/50-60	213T-215T	13
BLWM09-F	230/380-460	3	60/50-60	254T-256T	27
BLWM10-F	230/380-460	3	60/50-60	284T-286T	35
BLWM12-F	230/380-460	3	60/50-60	324T-326T	46
BLWM14-F	230/380-460	3	60/50-60	364T-365T	55
BLWM16-F	230/415-460	3	60/50-60	404T-405T	70
BLWM18-F	230/415-460	3	60/50-60	444T-447T	120

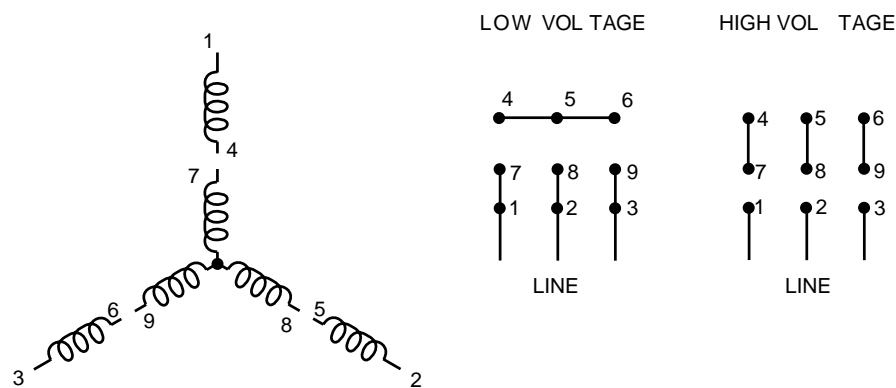
Note: Contact Baldor for information for blower information on 449T, 5000, and 5800 frames.

Connection Diagrams Blower Motor

Single Phase



Three Phase

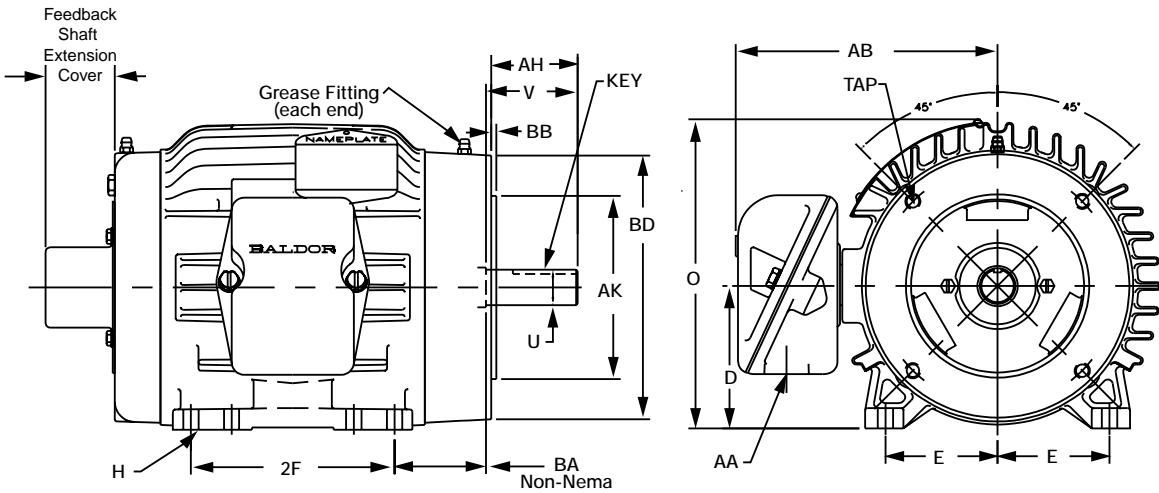


Note: CCW from ODE of fan motor.
Interchange any two line leads to reverse rotation to direct air flow over motor.

Note: Blower motor should be connected to line (mains) power for proper operation. Do not connect blower to variable frequency output of control to inverter or vector drive motor. Allow sufficient clearance for air flow into blower. Restrictions and blockage from debris may cause motor overheating.

Dimensions

TENV Inverter Drive® Motors



Rolled Steel Construction

NEMA FRAME	Feedback Shaft Exten. Cover	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
56C	1.70	3.50	2.44	3.00	0.34	2.06	6.81	5.73	2.75	0.625	1.87	6.51	4.50	5.88	3/8-16	0.88	0.13
143TC				4.00												0.50	
145TC	1.76	3.50	2.75	5.00	0.34	2.13	6.81	5.73	2.75	0.875	2.25	6.51	4.50	5.88	3/8-16	NPT	0.12
182TC				4.50												0.75	
184TC	1.76	4.50	3.75	5.50	0.41	2.62	8.44	6.87	3.5	1.125	2.75	8.86	8.50	7.25	1/2-13	NPT	0.25
213TC				5.50												0.75	
215TC	1.76	5.25	4.25	7.00	0.41	3.12	10.03	8.05	4.25	1.375	3.25	9.04	8.50	7.25	1/2-13	NPT	0.25
254TC				8.25												0.125	
256TC	1.79	6.25	5.00	10.00	0.53	3.75	12.00	8.73	4.75	1.625	3.88	9.44	8.50	7.25	1/2-13	NPT	0.25

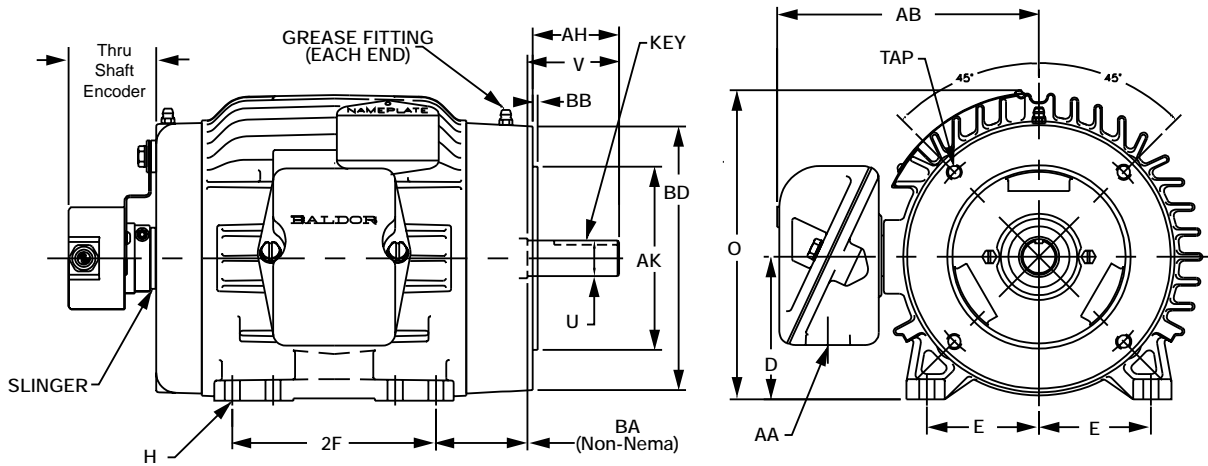
Cast Iron Construction

NEMA FRAME	Thru Shaft Encoder	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC				4.00													
145TC	1.73	3.50	2.75	5.00	0.38	2.12	7.59	6.43	2.25*	0.875	2.25	6.48	4.50	5.88	3/8-16	1.09	0.13
182TC				4.50													
184TC	1.70	4.50	3.75	5.50	0.41	2.63	9.23	7.18	3.50	1.125	2.75	8.87	8.50	7.25	1/2-13	1.09	0.25
213TC				5.50													
215TC	1.73	5.25	4.25	7.00	0.41	3.12	10.99	8.67	4.25	1.375	3.25	9.06	8.50	7.25	1/2-13	1.38	0.25
254TC				8.25													
256TC	1.75	6.25	5.00	10.00	0.53	3.75	12.88	10.04	4.75	1.625	4.00	9.09	8.50	7.25	1/2-13	1.38	0.25
284TC				9.50													
286TC	1.75	7.00	5.50	11.00	0.53	4.37	14.44	13.11	4.75	1.875	4.62	11.21	10.50	9.00	1/2-13	2.00	0.25

Note: Dimensions are for reference only, please contact Baldor for certified dimensions. *Non-Nema BA dimension.

Please refer to page 8 for TENV inverter motor "C" dimension.

TENV Vector Drive® Motors



Rolled Steel Construction

NEMA FRAME	Thru Shaft Encoder	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC				4.00												0.50	
145TC	2.15	3.50	2.75	5.00	0.34	2.13	6.81	5.73	2.75	0.875	2.25	6.51	4.50	5.88	3/8-16	NPT	0.13
182TC				4.50												0.75	
184TC	2.15	4.50	3.75	5.50	0.41	2.62	8.44	6.87	3.50	1.125	2.75	8.86	8.50	7.25	1/2-13	NPT	0.25
213TC				5.50												0.75	
215TC	2.15	5.25	4.25	7.00	0.41	3.12	10.03	8.05	4.25	1.375	3.25	9.04	8.50	7.25	1/2-13	NPT	0.25
254TC				8.25												1.25	
256TC	2.29	6.25	5.00	10.00	0.53	3.75	12.00	9.73	4.75	1.625	3.87	9.44	8.50	7.25	1/2-13	NPT	0.25

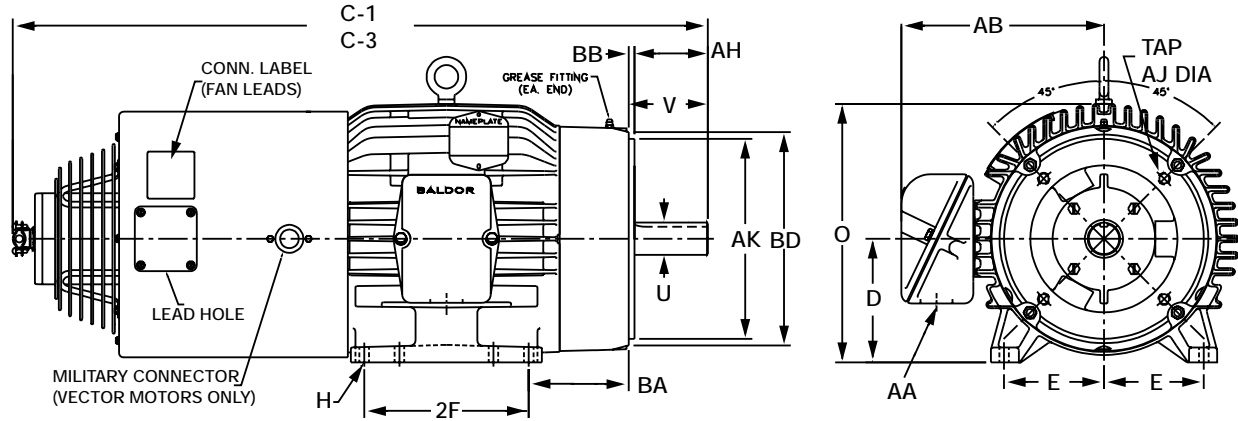
Cast Iron Construction

NEMA FRAME	Thru Shaft Encoder	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC				4.00													
145TC	2.15	3.50	2.75	5.00	0.38	2.12	7.59	6.43	2.25*	0.875	2.25	6.48	4.50	5.88	3/8-16	1.09	0.13
182TC				4.50													
184TC	2.15	4.50	3.75	5.50	0.41	2.63	9.23	7.18	3.50	1.125	2.75	8.87	8.50	7.25	1/2-13	1.09	0.25
213TC				5.50													
215TC	2.15	5.25	4.25	7.00	0.41	3.12	10.99	9.21	4.25	1.375	3.25	9.06	8.50	7.25	1/2-13	1.38	0.25
254TC				8.25													
256TC	2.29	6.25	5.00	10.00	0.53	3.75	12.88	10.04	4.75	1.625	3.87	9.09	8.50	7.25	1/2-13	1.38	0.25
284TC				9.50													
286TC	2.29	7.00	5.50	11.00	0.53	4.37	14.44	13.11	4.75	1.875	4.62	11.21	10.50	9.00	1/2-13	2.00	0.25

Note: Dimensions are for reference only, please contact Baldor for certified dimensions. *Non-Nema BA dimension.
Please refer to page 13 for TENV vector motor "C" dimension.

Dimensions

TEBC Inverter Drive® and Vector Drive® Motors



NEMA FRAME	C-1	C-3	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC					4.00													
145TC	19.11	18.65	3.50	2.75	5.00	0.38	2.13	7.59	6.43	2.25*	0.875	2.25	6.48	4.50	5.88	3/8-16	1.06	0.13
182TC					4.50													
184TC	22.17	21.71	4.50	3.75	5.50	0.41	2.62	9.23	7.18	3.50	1.125	2.75	8.87	8.50	7.25	1/2-13	1.06	0.25
213TC					5.50													
215TC	29.92	29.46	5.25	4.25	7.00	0.41	3.13	10.99	9.15	4.25	1.375	3.37	9.06	8.50	7.25	1/2-13	1.38	0.25
254TC					8.25													
256TC	33.85	33.39	6.25	5.00	10.00	0.53	3.75	12.88	10.04	4.75	1.625	4.00	9.09	8.50	7.25	1/2-13	1.38	0.25
284TC					9.50													
286TC	37.26	36.80	7.00	5.50	11.00	0.53	4.38	14.44	13.12	4.75	1.875	4.63	11.21	10.50	9.00	1/2-13	2.00	0.25
324TC					10.50													
326TC	39.76	39.24	8.00	6.25	12.00	0.53	5.00	16.25	14.62	5.25	2.125	5.25	13.40	12.50	11.00	5/8-11	2.50	0.25
364TC					11.25													
365TC	42.02	41.58	9.00	7.00	12.25	0.66	5.63	18.38	14.97	5.88	2.375	5.88	12.90	12.50	11.00	5/8-11	3.62	0.25
404TC					12.25													
405TC	**	46.68	10.00	8.00	13.75	0.81	7.00	20.31	18.78	6.62	2.875	7.25	12.89	12.50	11.00	5/8-11	3.63	0.25
444TC					14.50													
445TC	**	51.99	11.00	9.00	16.50	0.81	8.25	22.85	20.43	7.50	3.375	8.50	16.68	16.00	14.00	5/8-11	3.62	0.25
445TC					16.50													
447TC	**		11.00	9.00	20.00	0.81	8.25	22.85	20.45	7.50	3.375	8.50	16.68	16.00	14.00	5/8-11	3.00	0.25
447TC					20.00													
449TC	**		11.00	9.00	25.00	0.81	8.25	22.94	21.71	7.50	3.375	8.50	16.77	16.00	14.00	5/8-11	3.00	0.25

Note: C-1 = Dimension includes single phase blower kit and fan motor. C-3 = Dimension includes three phase blower kit and fan motor. Dimensions are for reference only. * Non-Nema BA dimension. ** Consult Baldor

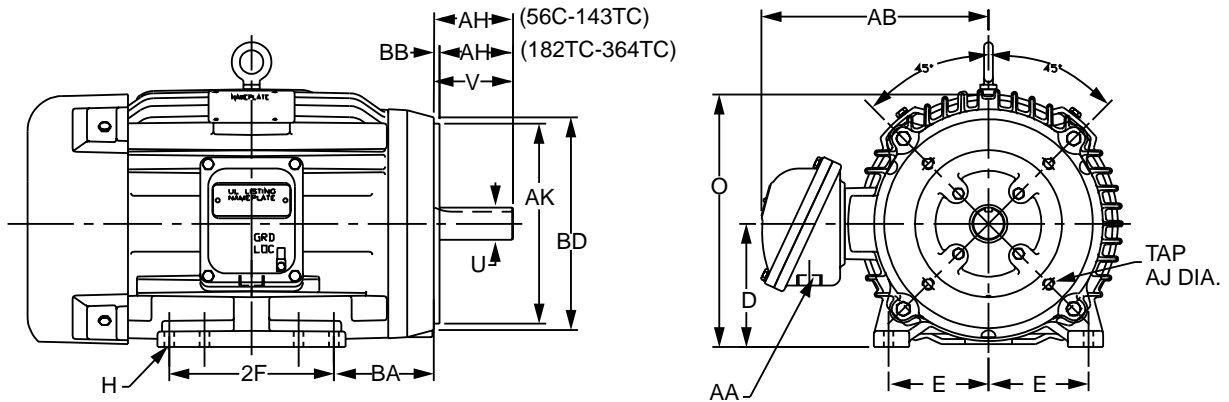
5000 Frame

NEMA FRAME	C-1	C-3	D	E	2F	H	N-W AH	O	AB	BA	U	V	AA
5007L		56.56			22.00								4.00
5009L	N/A	77.81	12.50	10.00	28.00	0.94	11.62	26.84	26.88	8.50	3.875	11.12	NPT

Note: Dimensions are for reference only, please contact Baldor for certified dimensions.

Dimensions

TEFC Inverter Drive® Explosion-Proof Motors



Rolled Steel Construction

NEMA FRAME	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
56C	3.50	2.44	3.00	0.34	2.06	7.09	6.92	2.75	0.625	1.88	6.46	4.50	5.88	3/8-16	0.50 NPT	0.13
143TC			4.00												0.75	
145TC	3.50	2.75	5.00	0.34	2.12	7.09	6.92	2.75	0.875	2.25	6.46	4.50	5.88	3/8-16	NPT	0.13

Cast Iron Construction

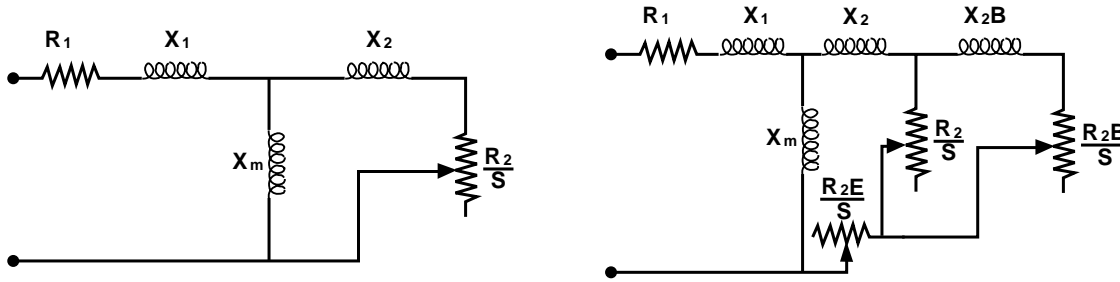
NEMA FRAME	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
182TC			4.50													
184TC	4.50	3.75	5.50	0.41	2.62	9.56	8.55	3.50	1.125	2.75	8.96	8.50	7.25	1/2-13	0.75	0.13
213TC			5.50													
215TC	5.25	4.25	7.00	0.41	3.12	10.75	9.66	4.25	1.375	3.37	9.05	8.50	7.25	1/2-13	0.75	0.25
254TC			8.25													
246TC	6.25	5.00	10.00	0.53	3.75	12.94	11.25	4.75	1.625	4.00	9.13	8.50	7.25	1/2-13	1.25	0.25
284TC			9.50												1.25	
286TC	7.00	5.50	11.00	0.53	4.37	14.74	14.32	4.75	1.875	4.62	11.23	10.50	9.00	1/2-13	NPT	0.25
324TC			10.50												1.50	
326TC	8.00	6.25	12.00	0.66	5.00	16.63	15.23	5.25	2.125	5.25	13.38	12.50	11.00	5/8-11	NPT	0.25
364TC			11.25			18.50	17.51								2.50	
365TC	9.00	7.00	12.25	0.66	5.63	18.44	17.35	5.88	2.375	5.88	13.52	12.50	11.00	5/8-11	NPT	0.25

Cast Iron Construction (Non-C-Face)

NEMA FRAME	D	E	2F	H	N-W	O	AB	BA	U	V	AA
254T			8.25								
256T	6.25	5.00	10.00	0.53	4.20	12.94	11.25	4.25	1.625	4.00	1.25
405T	10.00	8.00	13.75	0.81	7.56	21.00	18.35	6.62	2.875	7.25	2.50 NPT

Note: Dimensions are for reference only, please contact Baldor for certified dimensions.

Motor Circuit Parameters Per Phase 230/460 Volt Ratings



NOTE: NEMA TS Frames have same circuit parameters as equivalent NEMA TC catalog numbers.

Motor Rating				Vector Drive Motor Circuit																
60Hz		NEMA Frame	Catalog #	Type	Ohms @ 20°C Resistance Inductance				Ohms @ 20°C Primary Self Inductance Xm Magnetic Flux		Ohms @ 20°C Leakage (Total)			Watts Irons Loss Loss Magnetic Flux		Watts Mechanical Speed (Total)	% of Synchronous Slip			
HP	RPM				R1	R2	R2B	R2E	100%		X1	X2	X2B	100%	90%		100%	90%	No Load	Full Load
									90%	90%										
0.33	1725	56C	IDNM3534	3513M	28.3	24.3	-	-	885	888	34.7	22.3	-	17	14	14	0.278	3.82		
0.50	1725	56C	IDNM3538	3516M	20.0	12.1	-	-	475	485	17.5	12.2	-	32	26	14	0.177	2.81		
0.75	1725	56C	IDNM3542	3520M	11.0	8.92	-	-	389	397	13.2	10	-	40	32	14	0.146	2.99		
1	1750	143TC	ZDWNM3546T	3524M	7.55	5.29	-	-	310	320	9.97	8.04	-	31	25	14	0.0972	2.31		
1	1725	143TC	ZDNM3581T	0524M	9.19	6.14	-	-	283	292	9.15	7.38	-	55	44	14	0.118	2.74		
1	1725	143TC	ZDM3581T	0516M	7.70	5.40	-	-	309	319	9.97	8.04	-	31	25	14	0.100	2.4		
1	1150	145TC	ZDM3582T	0532M	9.74	7.03	-	-	217	223	14.1	11.8	-	23	19	9	0.0937	3.34		
1.5	1750	145TC	ZDWNM3554T	3535M	4.27	3.36	-	-	211	219	6.15	5.5	-	46	37	14	0.0781	2.14		
1.5	1725	145TC	ZDNM3584T	0532M	5.16	3.92	-	-	246	252	7.25	6.35	-	64	52	14	0.0833	2.54		
1.5	1725	145TC	ZDM3584T	0528M	5.15	3.84	-	-	211	231	6.87	5.78	-	45	35	14	0.083	2.50		
1.5	1160	182TC	ZDM3667T	0623M	3.68	3.0	-	-	146	147	12.9	10.4	-	37	30	19	0.0742	2.17		
2	1725	182TC	ZDWNM3609T	3628M	3.04	2.7	-	-	164	173	5.51	4.44	-	101	80	24	0.0938	2.33		
2	1725		ZDNM3558T																	
2	1725	145TC	ZDM3587T	0528M	4.35	3.43	-	-	211	231	6.15	5.5	-	46	-	14	0.06	2.00		
2	1160	184TC	ZDM3664T	0640M	2.36	2.11	-	-	105	105	9.11	7.47	-	52	42	19	0.0638	2.00		
3	1750	184TC	ZDWNM3611T	3634M	1.77	1.34	-	-	139	142	5.25	4.57	-	78	63	24	0.0556	1.72		
3	1750	184TC	ZDNM3661T	0634M	2.36	1.7	-	-	137	138	5.71	4.48	-	47	38	24	0.0486	2.22		
3	1760	182TC	ZDM3661T	0628M	1.89	1.33	-	-	122	132	5.09	4.23	-	83	66	24	0.0582	1.73		
3	1160	213TC	ZDM3764T	0735M	1.38	4.8	1.26	0.207	71.2	76.2	4.48	3.37	5.95	58	47	24	0.0365	1.61		
5	1760	213TC	ZDWNM3707T	3735M	0.852	2.28	0.598	0.175	73.8	79.9	2.72	1.68	2.83	101	81	59	0.0399	1.37		
5	1760	184TC	ZDNM3665T																	
5	1750	184TC	ZDM3665T	0640M	1.28	0.957	-	-	76.7	79.5	2.73	2.13	-	85	68	24	0.0382	2.03		
5	1160	215TC	ZDM3768T	0750M	0.747	1.09	-	-	45.9	51.9	4.23	4.06	-	110	92	24	0.035	1.56		
7.5	1765	254TC	ZDWNM22937T	3940M	0.469	0.371	-	-	60.5	60.8	1.89	2.16	-	113	90	80	0.0347	1.15		
7.5	1760	213TC	ZDNM3770T	0750M	0.43	0.319	-	-	48.5	50.7	1.88	2.01	-	157	125	60	0.017	0.67		
7.5	1760	213TC	ZDM3770T	0735M																
7.5	1180	254TC	ZDM2276T	0948M	0.513	0.384	-	-	44.3	45.0	2.76	2.82	-	121	96	60	0.02	0.85		
10	1765	256TC	ZDWNM22938T	3936M	0.371	0.321	-	-	56.4	56.5	1.65	2.06	-	121	98	80	0.0313	1.33		
10	1760	256TC	ZDNM2238T	0948M	0.331	1.0	0.264	0.0521	39.8	40.3	1.23	0.871	1.31	253	204	80	0.033	1.08		
10	1760	215TC	ZDM3774T	0750M	0.43	0.319	-	-	48.5	50.7	1.88	2.01	-	157	125	60	0.017	0.67		
10	1180	256TC	ZDM2332T	0952M	0.398	0.3	-	-	33.9	35.5	2.2	2.27	-	153	125	60	0.02	0.85		
15			ZDWNM22939T																	
15	1765	254TC	ZDNM2333T	0948M	0.224	0.184	-	-	26.4	29.7	0.904	1.1	-	230	185	80	0.02	0.77		
15	1765	254TC	ZDM2333T	0936M	0.32	0.239	-	-	29.4	34.7	1.18	1.31	-	190	155	80	0.02	1.03		
15	1170	284TC	ZDM4100T	1054M	0.30	0.952	0.217	0.061	29.9	30.4	1.19	0.723	-	190	150	70	0.018	1.00		
20			ZDWNM22940T																	
20	1765	284TC	ZDNM4102T																	
20	1765	256TC	ZDM2334T	0948M	0.204	0.172	-	-	23.1	27.0	0.836	1.01	-	250	200	80	0.02	1.00		
20	1170	286TC	ZDM4102T	1060M	0.219	0.753	0.172	0.043	22.9	23.9	0.936	0.580	1.26	240	190	70	0.018	1.00		
25	1780	284TC	ZDM4103T	1046M	0.150	0.685	0.100	0.035	18.0	20.9	0.680	0.543	0.890	285	230	80	0.017	0.83		
25	1180	324TC	ZDM4111T	1248M	0.134	0.388	0.109	0.033	17.8	20.2	0.839	0.499	1.03	305	245	70	0.015	1.00		
30	1780	286TC	ZDM4104T	1056M	0.118	0.597	0.0869	0.025	17.7	19.1	0.594	0.478	0.811	287	229	229	0.02	1.28		
30	1180	326TC	ZDM4117T	1254M	0.106	0.328	0.092	0.025	14.2	16.7	0.7	0.428	0.866	360	290	70	0.015	0.90		
40	1780	324TC	ZDM4110T	1256M	1.071	0.058	-	-	13.2	14.5	0.442	0.513	-	420	335	120	0.02	0.70		
40	1185	364TC	ZDM4308T	1458M	0.0725	0.0574	-	-	11.5	12	0.448	0.395	-	402	320	269	0.0143	0.944		

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Motor Circuit Parameters Per Phase 230/460 Volt Ratings

Motor Rating					Vector Drive Motor Circuit													
60Hz		NEMA Frame	Catalog #	Type	Ohms @ 20°C Resistance Inductance				Ohms @ 20°C Primary Self Inductance Xm		Ohms @ 20°C Leakage (Total)			Watts Irons Loss		Watts Mechanical Speed (Total)	% of Synchronous	
HP	RPM				R1	R2	R2B	R2E	Magnetic Flux		X1	X2	X2B	Magnetic Flux			No Load	Full Load
									100%	90%				100%	90%			
50	1780	326TC	ZDM4115T	1272M	0.057	0.048	-	-	10.5	12.1	0.36	0.432	-	495	400	120	0.010	0.70
50	1185	365TC	ZDM4312T	1468M	0.0559	0.0467	-	-	9.52	9.96	0.358	0.326	-	484	386	120	0.0124	0.955
60	1780	364TC	ZDM4314T	1462M	0.04	0.034	-	-	9.77	10.9	0.358	0.29	-	520	415	150	0.010	0.60
60	1185	404TC	ZDM4403T	1672M	0.054	0.035	-	-	7.47	8.80	0.260	0.407	-	560	450	200	0.006	0.60
75	1780	365TC	ZDM4316T	1480M	0.037	0.033	-	-	8.40	9.20	0.273	0.235	-	620	495	150	0.010	0.60
75	1185	405TC	ZDM4404T	1684M	0.038	0.027	-	-	6.95	7.73	0.207	0.35	-	660	530	200	0.006	0.55
100	1780	405TC	ZDM4400T-4	1680M	0.02	1.05	-	-	6.73	7.40	0.188	0.268	-	800	640	300	0.010	0.043
100	1180	444TC	ZDM4409T-4	1880M	0.0211	0.0164	-	-	5.22	5.6	0.171	0.255	-	819	654	300	0.0091	0.67
125	1780	444TC	ZDM4410T-4	1880M	0.018	0.013	-	-	4.69	5.56	0.19	0.134	-	850	690	400	0.010	0.57
150	1780	445TC	ZDM4406T-4	1892M	0.0137	0.011	-	-	4.57	5.07	0.154	0.119	-	980	790	420	0.007	0.50
200	1780	447TC	ZDM4407T-4	18112M	0.008	0.007	-	-	3.44	3.74	0.099	0.145	-	1350	1080	450	0.007	0.47
250	1780	449TC	ZDM4408T-4	18136M	0.0074	0.0208	0.0062	0.0011	3.16	3.5	0.0658	0.0781	0.103	1554	1240	1499	0.0069	0.594
300	1785	449TC	ZDM44304T-4	18160M	0.0058	0.0173	0.0052	0.0008	2.58	2.9	0.0498	0.065	0.0862	1876	1496	1499	0.0061	0.573
350	1785	449TC	ZDM44354T-4	18168M	0.0056	0.0164	0.0049	0.0007	2.44	2.74	0.0465	0.0616	0.0817	1982	1581	1499	0.0056	0.635
400	1785	5007L	ZDM50404L-4	20141M	0.0037	0.002	-	-	2.45	2.75	0.039	0.119	-	2827	2217	1089	0.1	0.8
450	1790	5007L	ZDM50454L-4	20153M	0.0027	0.0017	-	-	2.04	2.4	0.0327	0.105	-	3234	2461	1108	0.1	0.6
500	1790	5007L	ZDM50504L-4	20173M	0.0023	0.0013	-	-	1.84	2.15	0.028	0.094	-	3629	2863	1134	0.1	0.6

Motor Circuit Parameters Per Phase 575 Volt Ratings

Motor Rating					Vector Drive Motor Circuit													
60Hz		NEMA Frame	Catalog #	Type	Ohms @ 20°C Resistance Inductance				Ohms @ 20°C Primary Self Inductance Xm		Ohms @ 20°C Leakage (Total)			Watts Irons Loss		Watts Mechanical Speed (Total)	% of Synchronous	
HP	RPM				R1	R2	R2B	R2E	Magnetic Flux		X1	X2	X2B	Magnetic Flux			No Load	Full Load
									100%	90%				100%	90%			
1	1750	143TC	ZDM3581T-5	0524M	11.9	8.22	-	-	480	497	15.5	12.5	-	31	25	14	0.0972	2.30
1.5	1750	145TC	ZDM3584T-5	0528M	7.91	5.81	-	-	322	355	10.6	8.87	-	43	35	14	0.0833	2.42
2	1750	145TC	ZDM3587T-5	0535M	6.66	5.17	-	-	323	336	9.45	8.44	-	47	38	14	0.0781	2.87
3	1760	182TC	ZDM3661T-5	0628M	3.24	2.1	-	-	194	209	8.04	6.68	-	82	66	24	0.059	1.75
5	1750	184TC	ZDM3665T-5	0640M	1.89	1.53	-	-	123	127	4.35	3.4	-	83	67	24	0.0399	2.06
7.5	1760	213TC	ZDM3770T-5	0735M	1.05	0.636	-	-	80.9	91.8	3.76	3.65	-	129	104	59	0.0295	1.32
10	1760	215TC	ZDM3774T-5	0750M	0.646	0.495	-	-	75.1	78.7	2.92	3.11	-	160	130	50	0.02	0.95
15	1760	254TC	ZDM2333T-5	0942M	0.496	0.374	-	-	46.2	54.3	1.85	2.05	-	190	155	80	0.03	1.07
20	1765	256TC	ZDM2334T-5	0952M	0.326	0.273	-	-	37.3	43.1	1.33	1.61	-	250	200	80	0.02	1.00

Optional Accessories

Cable Assembly Kits

For the convenience of our customers, we offer a cable with a wired motor-end M.S. connector mating plug for feedback from Vector Drive Motors.

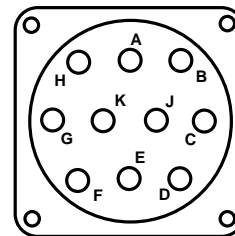
CATALOG NO.	CABLE LENGTH	APPROX. WEIGHT
CBL015ZD-2	5 FEET = 1.5 METERS	2
CBL030ZD-2	10 FEET = 3.0 METERS	2
CBL046ZD-2	15 FEET = 4.6 METERS	4
CBL061ZD-2	20 FEET = 6.1 METERS	5
CBL091ZD-2	30 FEET = 9.1 METERS	7
CBL152ZD-2	50 FEET = 15.2 METERS	10
CBL229ZD-2	75 FEET = 22.9 METERS	14
CBL305ZD-2	100 FEET = 30.5 METERS	19
CBL379ZD-2	125 FEET = 38.1 METERS	24
CBL455ZD-2	150 FEET = 45.7 METERS	29
CBL606ZD-2	200 FEET = 61.0 METERS	34

Connection Diagram for Cable Assembly Kit

ENCODER CONNECTION	MS CONNECTOR PIN OUT	WIRE COLOR	RESOLVER CONNECTION
A	A	GREY	SINE (+)
\bar{A}	H	VIOLET	SINE (-)
B	B	YELLOW	COS (+)
\bar{B}	J	ORANGE	COS (-)
Z (or C)	C	BLUE	-
\bar{Z} (or \bar{C})	K	GREEN	-
+5VDC	D	WHITE	EXCITATION (REF HIGH)
SHIELD	E	SHIELD	SHIELD
CIRCUIT GROUND	F	BLACK	COMMON (REF LOW)
CASE GROUND	G	-	-

Encoder Receptacle Connections

PIN	FUNCTION
A	A
B	B
C	Z(C)
D	VDC (5-15 VDC Standard)
E	Shield
F	Circuit Ground
G	Case Ground
H	A Compliment (\bar{A})
J	B Compliment (\bar{B})
K	Z (C) Compliment (\bar{Z} or \bar{C})



Standard Receptacle MS3112E12-10P (Baldor Part # WD1434)

Standard Plug MS3116J12-10S (Baldor Part # WD1435)

Both receptacle and plug are provided with the motor. Note that together these connections are weatherproof.

Baldor Super-E® motors are Inverter - Ready

Baldor's Super-E® motors rated 1-800 Hp meet the requirements of NEMA MG 1, Part 31.4.4.2. for peak voltage when used on inverters. A primary cause of failure in motors used on inverters is insulation breakdown due to voltage spikes. By using ISR® (Inverter Spike Resistant) magnet wire, phase insulation, and insulation varnish with 100% solids, Baldor Super-E motors can withstand the 1600 volt peaks called out in NEMA Part 31.4.4.2.



INVERTER READY

PER NEMA STD MG1
PART 31.4.4.2

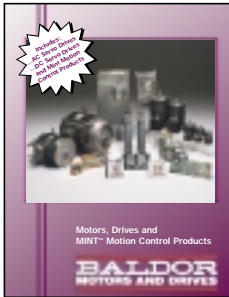
The complete NEMA Part 31 standard for Definite-Purpose Inverter-Fed Motors, lists many requirements other than peak voltage. Baldor's stock Inverter Drive Motors and Vector Drive Motors meet all the requirements of Part 31. These motors can be applied with inverters or vector controls and be expected to perform satisfactorily for torque, temperature, noise, and vibration over the entire speed range.

Unlike the Inverter Duty motors, Super-E motors will not have the wide constant torque speed range. Typical constant torque speed range for Super-E motors may be 5:1 to 20:1 depending on the motor design and rating. Contact Baldor for specific application recommendations when using Super-E motors on inverter applications.

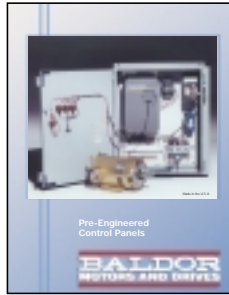
Conduit Box Volumes

MOTOR FRAME SIZE	BALDOR VOLUME IN ³	NEMA MINIMUM VOLUME IN ³	NPT HOLE SIZE
56C	8.2	7.5	0.875
143TC/145TC	20.6	12	0.75
182TC/184TC	20.6	16	0.75
213TC/215TC	48	26	1.0
254TC/256TC	48	26	1.25
284TC/286TC	221	26	1.5
324TC/326TC	221	55	2.0
364TC/365TC	221	100	2.0
404TC/405TC	388	180	2.5
444TC/445TC	600	600	2.5
445TC/447TC	600	600	2.5
447TC/449TC	1500	840	4.0
5007L-5009L	2100	1540	4.0

Additional Baldor Products for your Applications



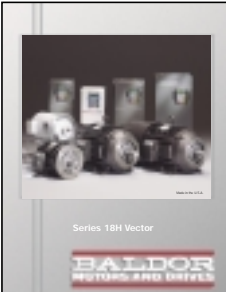
AC Brushless Servo Motors
BR1202



Pre-Engineered Control Panels
BR709



Adjustable Speed DC Controls
BR701



Vector Controls
BR718



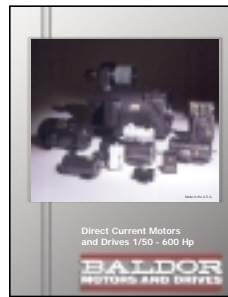
Linear Motors
CA1800



Baldor SmartMotor®
BR750



Bus Capabilities
BR1320



DC Motors
BR600