

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

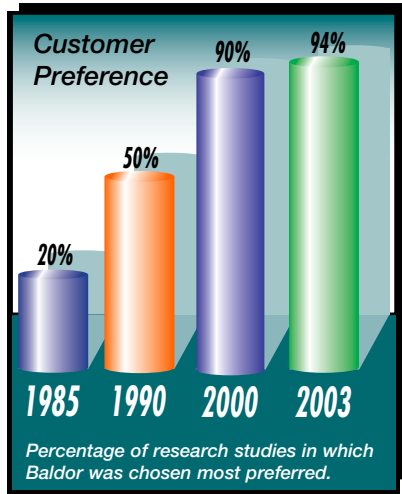


BALDOR[®]

MOTORS • DRIVES • GENERATORS

Why Baldor?

For over 85 years, Baldor has strived to provide customers with the best value and reliability in industrial electric motors. That dedication shows in customer preference for Baldor motors. To be considered as the most preferred...



Baldor offers the industry's broadest line of stock products. Save valuable time with just one call to Baldor. We offer more than 7,000 stock motors, drives, generators and gearboxes.

Energy-efficiency leader. We began lowering the energy consumption of our motors in the 1920s, long before others were even talking about it. Today, our expansive line of Super-E[®] premium-efficient motors ranges from 1 through 1250 hp. Baldor's Super-E[®] line offers customers the highest overall efficiency levels in the industry.



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

Our 35 district offices across North America offer immediate availability of Baldor products to thousands of distributors.

Continuous innovation to improve reliability. Baldor leads the motor industry in applying new technologies and materials to improve motor reliability. Baldor was the first to introduce ISR[®] (Inverter Spike Resistant[®]) magnet wire, which is up to 100 times more resistant to voltage spikes. Baldor was first to use Exxon's new Polyrex[®] EM grease, which protects motor bearings better, providing improved lubrication life, greater shear stability, and superior resistance to washout, rust and corrosion.

Industry's shortest lead times/Flexible manufacturing.

Baldor has the industry's shortest lead times on custom motors – just ten working days. Our unique FLEX FLOW

manufacturing process lets us produce any order in any quantity, quickly and efficiently.



Industry's best information. Only Baldor offers customers so many choices for product information with a wide variety of catalogs and product brochures, a CD-ROM electronic catalog, the Baldor Web site (www.baldor.com), or you may talk to a Baldor customer service person at one of our sales offices.

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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 1500 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 over a 1000:1 constant torque speed range may be required.



Baldor vector drive on a blown film extruder.

- 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 H2 Series 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 MG 1-2003, 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 two-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

Which drive technology do I choose?

The application, load and desired speed regulation will influence your decision on which drive technology will be selected. The following table will indicate which drive technology may be best suited for your application requirements. Inverter Duty or Vector Duty motors would be selected.

Performance Feature	Inverter Drive	Vector Drive
Variable torque loads — fans and centrifugal pumps	X	X
1000:1 constant torque speed range	X	X
Speed regulation ~ 2-3% of base speed	X	
Precise speed regulation \pm 1 RPM of set speed		X
Full torque at zero RPM		X
Positioning capability		X
Speed control		X
Torque control		X
Constant HP operation above base speed	X	X
PID control	X	X
Leader-follower mode	X	X

Going Beyond the Industry Standard in Inverter Drive® and Vector Drive® Motors

Baldor's Inverter Drive and Vector Drive motors are another example of our commitment to provide reliable performance, while exceeding customer expectations.

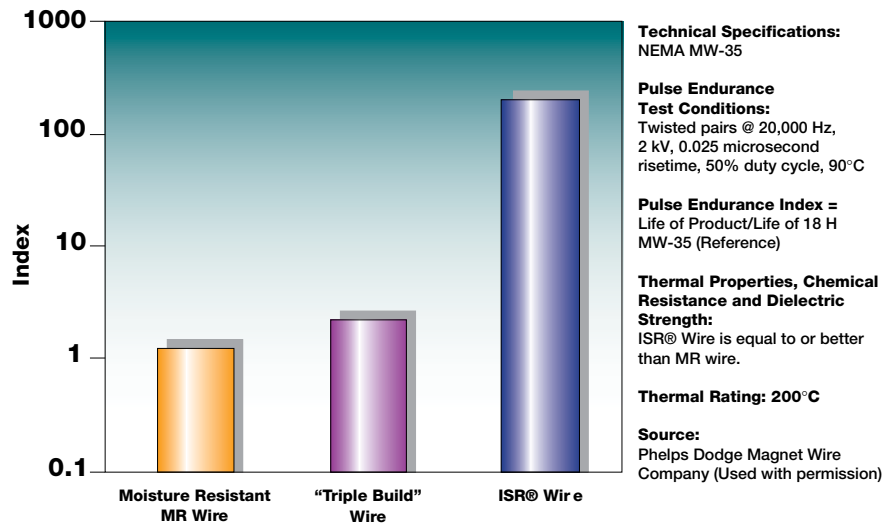


Wound with ISR® (Inverter Spike Resistant®) Magnet Wire

Recognized as "Product of the Year" by *Plant Engineering* magazine in 1996, Baldor's ISR wire is a standard feature in Baldor AC motors, 575 volt and under, 1 hp and up.

Motors wound with ISR wire are up to 100 times more resistant to transient voltage spikes, high frequencies and short rise time pulse frequently produced by inverters and vector drives. The result is a better motor with longer life, reduced downtime and better overall value.

ISR® Wire is Superior in Pulse Endurance Test



Making Energy Efficiency Work For You

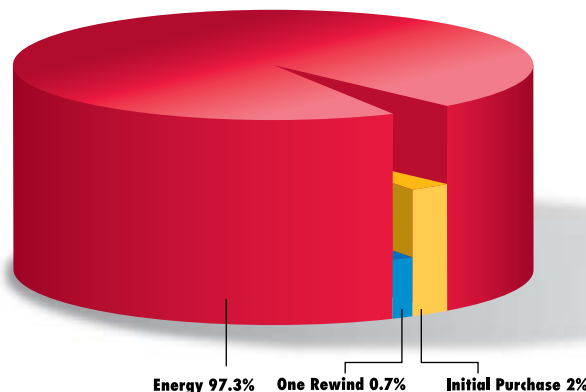


Why is Energy Efficiency Important?

Electric motor-driven systems used in industrial processes consumed 679 billion kWh, or 63% of all electricity used in U.S. industrial sector, according to a U.S. Department of Energy report published in 1998. The report goes on to reveal that industrial motor energy could be reduced by up to 18 percent if companies were to apply motor and motor system efficiency upgrades, including the use of adjustable speed drives. The potential positive impacts on companies' bottom lines and the environment are significant. Most Inverter Drive and Vector Drive motors comply with or exceed NEMA Premium® efficiency levels.

Purchase Price is Only a Small Piece of the Pie

The pie chart to the right shows the typical life cycle cost of a 100 hp motor operating in continuous duty over a 20-year life. As you can see, the original purchase price is almost insignificant compared to what it will cost to power the motor during its useful



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.

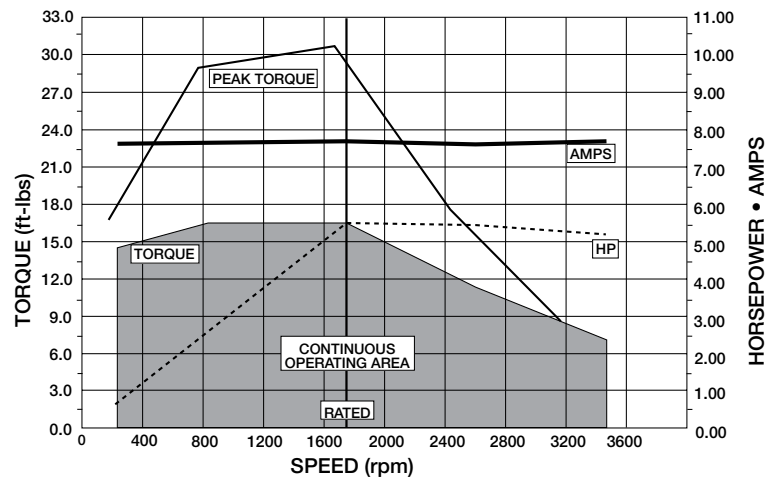
These curves show the **continuous operating** constant torque speed range that can be produced without exceeding Class F temperature rise in the motor. The lower Class F rise is selected to provide long life, even when a Class H insulation system is used in Baldor Inverter Drive and Vector Drive motors.

Peak Torque is the maximum amount of torque a Baldor H2 Inverter or 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.

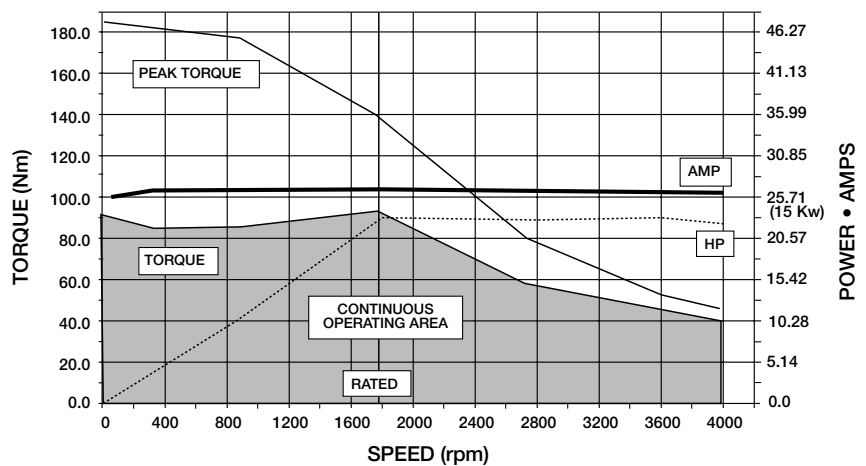
Motor: IDM3665T - 5 Hp

Control: IHH405-E - 5 Hp H2 Inverter/Encoderless Vector



Motor: ZDM2334T - 20 Hp

Control: ZHH420-E - 20 Hp H2 Vector



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 Inverter Motor and Drives on a medical label printer.

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 on PWM power	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 - 2003, Part 31	s	s
Thermal Protection	Winding thermostats (normally closed contacts)	s	s
	Thermistors	o	o
Space Heaters	120 volt standard, other voltages optional	o	o
Feedback Devices	1024 PPR electrically isolated through-shaft 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
	IEC	o	o	o	o	o	o	o
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-256TC)	s	s	s ^①	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	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 MG 1-2003 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 polyurea grease	s	s	s	s	s	s	s
Shaft Grounding Brush	SGS shaft grounding brush (stock motors)	o	o	o	o	s	s	o
Bearing Isolation	Ceramic outer race, ceramic balls or insulated insert in endplate available based on application	o	o	o	o	o	o	o
Grease Provisions	Regreasable without removal of fan cover	s	s	s	s	s	s	s
Limited Warranty	18 months-motor only months when used with Baldor control	s	s	s	s	s	s	s

s= standard, o= optional

① to 256TC

Inverter Drive® and Vector Drive® Motors



Totally-Enclosed Non-Vented (TENV)

3Hp TENV Inverter Drive Motor Catalog # IDNM3661T



Totally-Enclosed Blower-Cooled (TEBC)

20Hp TEBC Vector Drive Motor Catalog # ZDM4102T

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 CATALOG NO.	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT			% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW							IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
0.33	0.25	1725	6000	56C	IDNM3534	Custom	13.84	0.45	0.6	1	3.4	3.8	76	.0771	29	6205	6203
0.5	0.37	1725	6000	56C	IDNM3538	Custom	13.84	0.50	0.8	1.5	5.2	6.5	75.5	.0949	32	6205	6203
0.75	0.56	1725	6000	56C	IDNM3542	Custom	13.84	0.65	1.1	2.3	6.5	8.3	80	.1420	35	6205	6203
1	0.75	1725	6000	143TC	IDNM3581T	ZDNM3581T	14.65	0.92	1.6	3	9.5	11	81.5	.1420	59	6205	6203
1.5	1.1	1725	6000	145TC	IDNM3584T	ZDNM3584T	14.65	1.05	2.0	4.5	14	17	82.5	.1900	65	6205	6203
2	1.5	1740	6000	145TC	IDNM3587T	Custom	14.65	1.4	2.7	6	24	25	84	.2080	64	6205	6203
2	1.5	1725	6000	182TC	IDNM3669T	ZDNM3669T	17.21	1.7	2.9	6	25	30	84	.2630	94	6206	6205
3	2.2	1750	6000	184TC	IDNM3661T	ZDNM3661T	17.21	2.0	4.0	9	22.9	37.1	88.5	.3190	108	6206	6205
5	3.7	1760	6000	184TC	IDNM3665T	Custom	17.21	3.6	6.6	15	43	60	89.5	.3700	115	6206	6205
5	3.7	1760	6000	213TC	IDNM3767T	ZDNM3767T	20.40	3.4	6.5	14.9	48	52	89.5	.7340	167	6307	6206
7.5	5.6	1760	5000	254TC	IDNM2237T	ZDNM2237T	24.05	5.3	9.8	22.2	63	85	89.5	1.400	250	6309	6208
10	7.5	1770	5000	256TC	IDNM2238T	ZDNM2238T	24.05	5.6	13.0	29.8	71.1	133	91.7	2.100	289	6309	6208
15	11.2	1765	5000	256TC	IDNM2333T	ZDNM2333T	24.05	8.9	18.5	45	102	176	94.1	.2630	286	6309	6208
20	14.9	1780	5000	284T	IDNM2334T	ZDNM2334T	27.36	15.5	25.5	60	143	256	94.5	4.460	437	6311	6309

For Dimensions refer to page 24

Shaded ratings are cast iron frames.

Performance Data 230/460 Volt Ratings-TEBC Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT			% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW							IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
1	0.7	1750	6000	143TC	IDM3581T	ZDM3581T	19.15	0.76	1.4	3	10	14.5	86.5	.1420	65	6205	6203
1	0.7	1150	6000	145TC	IDM3582T	ZDM3582T	19.15	1.2	1.8	4.5	9.2	12	82.5	.1660	69	6205	6203
1.5	1.1	1750	6000	143TC	IDM3584T	ZDM3584T	19.15	1.16	2.1	4.5	14	22	87.5	.1660	68	6205	6203
1.5	1.1	1160	6000	182TC	IDM3667T	ZDM3667T	21.71	1.8	2.6	6.8	12	18.5	86.5	.3000	110	6206	6205
2	1.5	1750	6000	145TC	IDM3587T	ZDM3587T	19.15	1.2	2.5	6	21	24	86.5	.2080	72	6205	6203
2	1.5	1160	6000	184TC	IDM3664T	ZDM3664T	21.71	2.5	3.6	9	15.4	29	87.5	.3800	123	6206	6205
3	2.2	1760	6000	182TC	IDM3661T	ZDM3661T	21.71	2.2	4.0	9	22	31	89.5	.2600	109	6206	6205
3	2.2	1160	6000	213TC	IDM3764T	ZDM3764T	29.14	3.3	5.0	13.5	23	45	89.5	.7460	174	6307	6206
5	3.7	1750	6000	184TC	IDM3665T	ZDM3665T	21.71	3.4	6.5	15	32	50	90.2	.3700	125	6206	6205
5	3.7	1160	6000	215TC	IDM3768T	ZDM3768T	29.14	4.9	8.0	22.6	57	83	88.5	.9950	200	6307	6206
7.5	5.6	1760	6000	213TC	IDM3770T	ZDM3770T	29.14	4.3	9.9	22.5	35	83	89.5	.7410	177	6307	6206
7.5	5.6	1180	5000	254TC	IDM2276T	ZDM2276T	33.07	5.52	10.7	33.3	58.4	99.5	91.7	4.340	282	6309	6208
10	7.5	1760	6000	215TC	IDM3774T	ZDM3774T	29.14	5.5	12.5	30	56	121	91.7	1.230	196	6307	6206
10	7.5	1180	5000	256TC	IDM2332T	ZDM2332T	33.07	7.15	14.2	44.4	75	144	91.7	4.820	324	6309	6208
15	11.2	1765	5000	254TC	IDM2333T	ZDM2333T	33.07	8.33	18.5	44.6	79.1	165	92.4	1.570	236	6309	6208
15	11.2	1180	4000	284T	IDM4100T	ZDM4100T	36.48	8.39	18.7	66.7	198	209	92.4	6.650	426	6311	6309
20	14.9	1765	5000	256TC	IDM2334T	ZDM2334T	33.07	9.79	24.0	59.5	116	199	93	2.100	286	6309	6208
20	14.9	1175	4000	286T	IDM4102T	ZDM4102T	36.48	10.12	25.0	89.3	278	272	92.4	7.360	476	6311	6309
25	18.7	1770	4000	284T	IDM4103T	ZDM4103T	36.48	11.43	30.0	74.2	125	238	93.6	3.660	432	6311	6309
25	18.7	1180	3900	324T	IDM4111T	ZDM4111T	39.24	12.6	32.0	111	292	323	93	9.210	619	6312	6311
30	22.4	1780	4000	286T	IDM4104T	ZDM4104T	36.48	14.5	36.0	90	143	256	94.1	4.460	458	6311	6309
30	22.4	1180	3900	326T	IDM4117T	ZDM4117T	39.24	16	38.0	134	359	416	93	10.40	654	6312	6311
40	29.8	1775	3900	324T	IDM4110T	ZDM4110T	39.24	16.01	47.0	118	207	385	94.5	7.460	578	6312	6311
40	29.8	1185	3600	364T	IDM4308T	ZDM4308T	41.58	19.14	49.0	177	270	520	94.1	18.20	780	6313	6312
50	37.3	1775	3900	326T	IDM4115T	ZDM4115T	39.24	19.13	57.0	148	290	451	94.5	8.260	679	6312	6311
50	37.3	1185	3600	365T	IDM4312T	ZDM4312T	41.58	24	61.0	221	379	700	94.1	21.10	823	6313	6312
60	45.0	1780	3600	364T	IDM4314T	ZDM4314T	41.58	23.5	69.0	177	278	556	95	11.70	808	6313	6312
60	45.0	1185	2800	405T	Custom	ZDM4403T	46.68	30	72.0	265	393	735	94.5	30.10	1,152	6316	6313
75	56.0	1780	3600	365T	IDM4316T	ZDM4316T	41.58	29.3	84.0	221	338	738	95.4	15.50	842	6313	6312
75	56.0	1185	2800	404T	IDM4404T	ZDM4404T	46.68	32.4	88.0	331	514	877	95	38.90	1,172	6316	6313
100	74.6	1780	2800	404T	IDM4400T-4	ZDM4400T-4	46.68	29.3	109	295	402	1000	95.4	28.60	1,251	6316	6313
100	74.6	1180	2400	444T	IDM4409T-4	ZDM4409T-4	51.98	44	120	445	528	1200	95.4	58.8	1,550	6319	6314
125	93.3	1780	2400	444T	IDM4410T-4	ZDM4410T-4	51.98	40	139	368	485	1130	95.4	32.7	1,550	6319	6314
150	112	1785	2400	445T	IDM4406T-4	ZDM4406T-4	51.98	55	173	442	485	1162	95.8	42.3	1,630	6319	6314
200	150	1785	2400	447T	IDM4407T-4	ZDM4407T-4	55.49	65	224	588	1020	2010	96.2	65.4	2,111	6319	6314
250	187	1785	2400	449T	Custom	Custom	63.63	64	275	735	929	2405	95.8	81.30	2,340	6319	6314
300	224	1785	2400	449T	Custom	Custom	63.63	90.2	333	883	1393	2630	95.8	90.70	2,292	6319	6314
350	261	1780	2400	449T	Custom	Custom	63.63	97	388	1032	1640	3450	95.4	95.0	2,390	6319	6314
400	298	1785	2000	5007L	Custom	Custom	68.06	97	432	1172	1047	2518	96.2	194	3,600	6322	6222
450	336	1790	2000	5007L	Custom	Custom	68.06	117	492	1320	1221	2988	96.5	209	3,600	6322	6222
500	373	1790	2000	5009L	Custom	Custom	74.06	130	540	1465	1394	3388	96.8	243	5,400	6322	6222

For Dimensions refer to page 25

Shaded ratings are cast iron frames.

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.



20Hp TEFC Vector Drive Motor Catalog # ZDM2334T-5

Performance Data 575 Volt Ratings - TEBC Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT			% EFF.	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	IDM3581T-5	ZDM3581T-5	19.15	0.61	1.1	3	10	14.5	86.5	.1420	64	6205	6203
1.5	1.1	1750	6000	145TC	IDM3584T-5	ZDM3584T-5	19.15	0.93	1.7	4.5	14	22	87.5	.1660	68	6205	6203
2	1.5	1750	6000	145TC	IDM3587T-5	ZDM3587T-5	19.15	0.96	2.0	6	21	24	86.5	.2080	73	6205	6203
3	2.2	1760	6000	182TC	IDM3661T-5	ZDM3661T-5	21.71	1.8	3.2	9	22	31	89.7	.2600	109	6206	6205
5	3.7	1750	6000	184TC	IDM3665T-5	ZDM3665T-5	21.71	2.7	5.2	15	32	50	90.2	.3700	123	6206	6205
7.5	5.6	1760	6000	213TC	IDM3770T-5	ZDM3770T-5	30.07	3.9	7.8	22.4	39	69.9	90.2	.8400	169	6307	6206
10	7.5	1760	6000	215TC	IDM3774T-5	ZDM3774T-5	30.07	4.4	10.0	30	56	121	91.7	1.230	196	6307	6206
15	11.2	1765	4000	254TC	IDM2333T-5	ZDM2333T-5	34.15	6.6	14.8	44.5	79	165	92.4	1.570	310	6309	6208
20	14.9	1765	4000	256TC	IDM2334T-5	ZDM2334T-5	34.15	7.6	19.0	59	114	195	93.0	2.100	286	6309	6208

For Dimensions refer to page 25

Shaded ratings are cast iron frames.

IEC Frame 50 Hertz Vector Drive® Motors

Baldor IEC Vector Drive motors are designed for 415 volt - 50 Hz operation on conveyors, material handling and other process industry applications. These motors are designed for applications requiring constant torque speed ranges of 1000:1 or better. Motors through 600 kW are available as custom motors with Baldor's short lead time. These motors are usually stocked by Baldor's international offices.



3.7kW TEBC Vector Drive Motor Catalog # ZDMM3665

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

50HZ		BASE SPEED	MAX. RPM	IEC FRAME	MOUNTING STYLE	ENCLOSURE	VECTOR CATALOG NO.	AMPS F.L.	OUTPUT TORQUE Nm			% EFF.	INERTIA Kg-CM ²	APPROX. WEIGHT Kg	BEARINGS	
kW	Hp								F.L.	L.R.	B.D.				DE	ODE
0.75	1	1500	6000	D80-B5	D90-B3 Foot	TENV	ZDMM3581	1.7				80.0	72	29	6205	6203
1.5	2	1500	6000	D90-B5	D112-B3 Foot	TENV	ZDMM3669	3.0				82.5	110	48	6205	6203
2.2	3	1500	6000	D100-B5	D112-B3 Foot	TENV	ZDMM3661	4.7	14.5	40.7	63.7	89.5	169	53	6205	6203
3.7	5	1500	6000	112M	B3 Foot	TEBC	ZDMM3665	7.1	24.4	54.2	85.4	89.5	156	62	6205	6203
3.7	5	1500	6000	112D	B5 Flange	TEBC	ZDMM3665D	7.1	24.4	54.2	85.4	89.5	156	65	6205	6203
5.5	7.5	1500	6000	132M	B3 Foot	TEBC	ZDMM3770	11.4	36.3	61	127.4	89.5	308	92	6208	6206
5.5	7.5	1500	6000	132D	B5 Flange	TEBC	ZDMM3770D	11.4	36.6	132.8	153.2	89.5	308	98	6208	6206
7.5	10	1500	6000	132M	B3 Foot	TEBC	ZDMM3774	14.4	49.6	135.6	170.8	90.2	440	98	6208	6206
7.5	10	1500	6000	132D	B5 Flange	TEBC	ZDMM3774D	14.4	49.6	135.6	170.8	90.2	440	102	6208	6206
11	15	1500	5000	160M	B3 Foot	TEBC	ZDMM2333	21.0	73.2	176.2	265.7	92.4	885	127	6305	6208
11	15	1500	5000	160D	B5 Flange	TEBC	ZDMM2333D	21.0	73.2	176.2	265.7	92.4	885	133	6305	6208
15	20	1500	5000	160L	B3 Foot	TEBC	ZDMM2334	27.0	98.3	172.2	306.4	92.4	969	141	6305	6208
15	20	1500	5000	160D	B5 Flange	TEBC	ZDMM2334D	27.0	98.3	172.2	306.4	91.7	969	142	6305	6208
18.5	25	1500	4000	180M	B3 Foot	TEBC	ZDMM4103	33.5	112.6	158.6	314.5	91.7	1879	187	6311	6309
22.5	30	1500	4000	180L	B3 Foot	TEBC	ZDMM4104	41.0	146.4	240	404	92.4	1955	216	6312	6311
30	40	1500	4000	200L	B3 Foot	TEBC	ZDMM4110	53.0	193.8	279	414	93.6	3285	250		
37	50	1500	4000	225S	B3 Foot	TEBC	ZDMM4115	67.0	241	875	793	94.5	4591	306	6313	6312
45	60	1500	4000	225M	B3 Foot	TEBC	ZDMM4314	78.0					4888	362		
56	75	1500	4000	250S	B3 Foot	TEBC	ZDMM4316	101					8546	465		
75	100	1500	3000	250M	B3 Foot	TEBC	ZDMM4400	128					11399	537		

Contact Baldor for current information and drawings on the above motors.

Shaded ratings are cast iron frames.

Washdown Duty Inverter Drive[®] and Vector Drive[®] 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
Ground Provisions	Inside conduit box for convenience	s	s	s
Lifting Provisions	Eyebolt in frame	s	s	s
Cooling Fan	Non-sparking glass	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
Balance	Dynamically balanced better than NEMA MG 1-2003 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

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

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT				% EFF.	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	IDWNM3546T	ZDWNM3546T	14.90	0.8	1.4	3.0	10.0	14.5	86.5	0.142	39	6205	6203	
1 1/2	1.1	1750	6000	145TC	IDWNM3554T	ZDWNM3554T	15.78	1.2	2.1	4.5	19.8	20.5	87.5	0.210	53	6205	6203	
2	1.5	1725	6000	182TC	IDWNM3609T	ZDWNM3609T	17.77	1.7	2.9	6.0	25.0	30.0	84.0	0.260	69	6206	6205	
3	2.2	1750	6000	184TC	IDWNM3611T	ZDWNM3611T	17.77	1.8	4.0	9.0	22.0	32.0	88.5	0.319	80	6206	6205	
5	3.7	1760	6000	213TC	IDWNM3707T	ZDWNM3707T	19.84	3.4	6.7	14.9	48.0	52.0	89.5	0.790	122	6307	6206	
7 1/2	5.6	1765	5000	254TC	IDWNM22937T	ZDWNM22937T	23.92	4.0	9.1	22.5	48.6	86.0	91.0	1.750	242	6309	6208	
10	7.5	1765	5000	254TC	IDWNM22938T	ZDWNM22938T	23.92	4.4	12.0	30.0	58.0	114	91.7	2.450	291	6309	6208	

For Dimensions refer to page 24



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

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

Performance Data 230/460 Volt Ratings-TEFC Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT				% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	kW							IDLE	F.L.	F.L.	L.R.	B.D.	DE				ODE	
1/2	0.4	1750	6000	56C	IDCSWDM3538	IDVSWDM3538	11.07	0.50	0.8	1.5	5.6	6.7	82.5	0.095	32	6205	6203	
3/4	0.6	1750	6000	56C	IDCSWDM3542	IDVSWDM3542	12.07	0.70	1.0	2.3	8.5	9.0	78.5	0.142	39	6205	6203	
1	0.75	1740	3600	56C	IDCSWDM3546	IDVSWDM3546	12.07	0.80	1.4	3.0	12.0	12.0	82.5	0.166	39	6205	6203	
1	0.75	1740	3600	143TC	IDCSWDM3546T	IDVSWDM3546T	12.12	0.80	1.4	3.0	12.0	12.0	82.5	0.166	42	6205	6203	
1 1/2	1.1	1750	4000	56C	IDCSWDM3554	IDVSWDM3554	13.24	1.16	2.1	4.5	14.0	22.0	87.5	0.166	45	6205	6203	
1 1/2	1.1	1750	4000	145TC	IDCSWDM3554T	IDVSWDM3554T	13.30	1.16	2.1	4.5	14.0	22.0	87.5	0.166	47	6205	6203	
2	1.5	1750	3600	56C	IDCSWDM3558	IDVSWDM3558	14.12	1.20	2.5	6.0	21.0	24.0	86.5	0.208	48	6205	6203	
2	1.5	1750	3600	145TC	IDCSWDM3558T	IDVSWDM3558T	14.18	1.20	2.5	6.0	21.0	24.0	86.5	0.208	52	6206	6205	
3	2.2	1760	6000	182TC	IDCSWDM3611T	IDVSWDM3611T	16.56	2.20	4.0	9.0	22.0	31.0	89.5	0.260	78	6206	6205	
5	3.7	1750	6000	184TC	IDCSWDM3615T	IDVSWDM3615T	18.06	3.20	6.5	15.0	32.0	52.0	89.5	0.370	93	6206	6205	
7 1/2	5.6	1760	6000	213TC	IDCSWDM3710T	Custom	19.81	5.70	10.0	22.0	67.0	79.0	86.5	0.988	140	6206	6205	
10	7.5	1760	6000	215TC	IDCSWDM3714T	Custom	20.56	8.40	13.0	29.9	99.0	119	89.5	1.230	158	6206	6205	

Note: These Inverter motors do not have provision to add encoders. 20:1 CTSR; 1000:1 VTSR.
For Dimensions refer to page 28

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)	s				
	Class I, Group D only. Temperature Code T2A, (280°C)		s	s	s	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-256TC)	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 Lifting Provisions	Inside conduit box for convenience	s	s	s	s	s
	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 Rotor Construction	Non-sparking, glass-filled polypropylene	s	s	s	s	s
	Special high pressure aluminum die cast with low loss electrical steel and special slot configuration	s	s	s	s	s
Balance	Dynamically balanced better then NEMA MG1-1998 specifications	s	s	s	s	s
	C1035 high strength steel	s	s			
Shaft Material	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	s	s	s	s	s
	24 months when used with Baldor control					

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

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT			% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW						IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
3	2.2	1760	2700	182TC	IDXM7142T	18.24	2.2	4.0	9	22.0	31.0	89.5	0.26	144	6206	6205
5	3.7	1750	2700	184TC	IDXM7144T	18.24	3.4	6.5	15	32.0	50.0	89.5	0.40	158	6206	6205
7 1/2	5 3/5	1760	2700	213TC	IDXM7147T	20.69	4.9	9.7	22	42.9	69.9	90.2	0.85	228	6307	6206
10	7.5	1760	2700	215TC	IDXM7170T	20.69	5.5	12.5	30	56.0	121	91.7	1.14	196	6307	6206
15	11.2	1765	2700	254TC	IDXM7054T	26.00	6.95	18.0	45	88.0	143	92.4	1.84	356	6309	6208
20	14.9	1765	2700	256TC	IDXM7056T	26.00	8.5	24.0	60	120	183	93.0	2.27	393	6309	6208
25	18.7	1780	2700	284T	IDXM7058T	28.61	11.9	30.5	74	137	226	93.6	3.98	494	6311	6309
30	22.4	1780	2700	286T	IDXM7060T	28.61	14.5	36.0	90	143	256	94.1	4.46	555	6311	6309
40	29.8	1780	2700	324T	IDXM7062T	32.12	15.3	46.0	118	221	285	94.5	7.50	782	6312	6311
50	37.3	1780	2700	326T	IDXM7064T	32.12	22.9	57.0	148	367	450	94.5	9.64	772	6312	6311
60	44.8	1780	2700	364T	IDXM7066T	33.25	24.0	69.0	178	440	500	94.5	11.70	1006	6313	6312
75	56	1780	2700	405T	IDXM7068T	38.75	25.6	85.0	222	524	510	93.6	22.40	1369	6316	6313

10:1 Constant Torque - 10:1 Variable Torque Ratings

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	INVERTER CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT			% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW						IDLE	F.L.	F.L.	L.R.	B.D.				DE	ODE
1/2	0.37	1750	2700	56C	IDXM7006	14.30	0.5	0.8	2	5.6	6.7	82.5	0.09	42	6205	6203
3/4	0.56	1750	2700	56C	IDXM7010	14.30	0.61	1.1	2	8.4	8.8	82.5	0.12	46	6205	6203
1	0.75	1750	2700	143TC	IDXM7014T	15.23	0.81	1.4	3	10.0	14.5	85.5	0.14	50	6205	6203
1 1/2	1.1	1750	2700	145TC	IDXM7034T	15.23	1.13	2.1	5	19.0	23.0	88.5	0.17	53	6205	6203
2	1.5	1750	2700	145TC	IDXM7037T	17.48	1.3	2.6	6	25.3	27.4	88.5	0.24	67	6205	6203
3	2.2	1760	2700	182TC	IDXM7542T	18.24	2.2	4.0	9	22.0	31.0	89.5	0.26	144	6206	6205
5	3.7	1750	2700	213TC	IDXM7544T	20.65	2.6	6.3	15	29.4	41.2	90.2	0.61	212	6307	6206
7 1/2	5 3/5	1760	2700	215TC	IDXM7547T	20.65	4.9	9.7	22	42.9	69.9	90.2	0.84	225	6307	6206
10	7.5	1760	2700	254TC	IDXM7570T	26.00	5.4	13.0	30	75.0	110	92.4	2.09	378	6309	6208
15	11.2	1765	2700	256TC	IDXM7554T	26.00	7.0	17.0	45	93.0	151	92.4	2.10	381	6309	6208
20	14.9	1760	2700	284T	IDXM7556T	28.61	8.6	24.5	59	96.0	167	90.2	3.50	516	6311	6309
25	18.7	1775	2700	324T	IDXM7558T	32.12	10.6	30.0	74	114	226	91.7	6.16	705	6312	6311
30	22.4	1760	2700	326T	IDXM7560T	32.12	13.3	35.0	89	147	276	94.5	7.46	731	6312	6311
40	29.8	1780	2700	364T	IDXM7562T	33.25	12.2	46.0	118	218	297	92.4	11.70	913	6313	6312
50	37.3	1780	2700	365T	IDXM7564T	33.25	12.2	61.0	147	266	343	92.4	11.70	971	6313	6312
60	44.8	1780	2700	405T	IDXM7566T	38.75	17.8	69.0	177	332	425	93.6	22.40	1341	6316	6313

For Dimensions refer to page 26-27

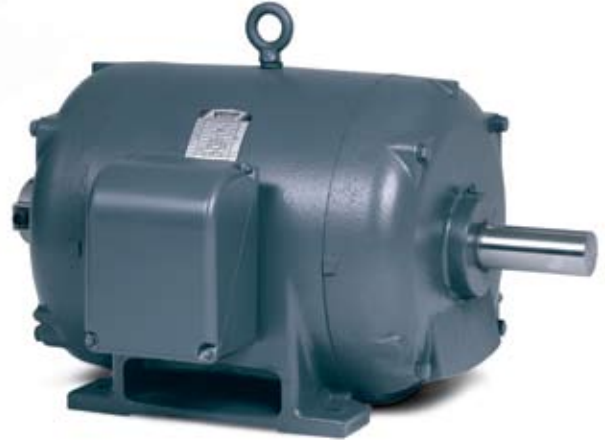
Shaded ratings are cast iron frames.

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.

Vector Drive® Elevator Motors

These Vector Drive motors are designed for elevator modernization where a premium efficient, quiet, high torque motor is required. Motors have cast iron frames and endplates, electrically isolated HS35 1024PPR optical encoder, Inverter Spike Resistant® magnet wire, Class H insulation, 50°C rise, 320% minimum breakdown torque, winding thermostat, 1/2" shaft endplay. Complies with NEMA MG 1-2003, Part 31.



30Hp ODP Vector Drive Motor Catalog # ZDME2536T-CI

Performance Data 230/460 Volt Ratings - ODP Enclosure

60HZ		BASE SPEED	MAX. SPEED	NEMA FRAME	VECTOR CATALOG NO.	"C" DIM	460 V AMPS		OUTPUT TORQUE LB-FT				% EFF.	WK ² LB-FT ²	APPROX. WEIGHT LBS	BEARINGS	
HP	KW						IDLE	F.L.	F.L.	L.R.	B.D.	DE				ODE	
10	7.5	1180	1800	256T	ZDME2511T-CI	24.70	11.7	17.0	43.3	105	164	89.5	3.53	280	6309	6309	
15	11.2	1180	1800	286T	ZDME2524T-CI	27.35	11.5	21.0	67	213	247	90.2	5.42	391	6310	6310	
20	14.9	1180	1800	286T	ZDME2528T-CI	27.35	15.8	27.5	90	283	329	90.2	6.16	422	6310	6310	
25	18.7	1180	1800	324T	ZDME2532T-CI	28.54	14.1	32.0	112	244	432	91.7	9.24	554	6311	6311	
30	22.4	1160	1800	326T	ZDME2536T-CI	30.04	16.7	39.0	136	220	532	91.7	10.8	595	6311	6311	
40	29.8	1180	1800	364T	ZDME2540T-CI	32.49	34.6	59.0	178	366	690	91.7	14.1	725	6313	6313	
50	37.3	1180	1800	365T	ZDME2544T-CI	32.49	37.5	70.0	222	480	713	91.0	14.1	789	6313	6313	
60	44.8	1185	1800	404T	ZDME2548T-CI	36.80	30.2	74.0	266	551	954	91.7	29.0	1072	6316	6316	
75	56.0	1185	1800	405T	ZDME2552T-CI	36.80	32.6	90.0	333	619	1153	91.7	34.8	1114	6316	6316	

For Dimensions refer to page 29

Shaded ratings are cast iron frames.

Inverter Drive® Gear Motors

Ideally suited for conveyors, material handling and packaging equipment applications requiring adjustable speed operation and reduced maintenance. Available in a broad range of gear ratios to meet demanding application requirements. Gearboxes are lubed for life and require no routine maintenance.



3/8 Hp Inverter Drive Gear Motor Catalog # IDGM2509

Performance Data 230 Volt Ratings - Right Angle - TEFC Enclosure

HP	KW	OUTPUT BASE SPEED	SPEED RANGE	GEAR RATIO	MAX TORQ lb.-in.	CATALOG NUMBER	FULL LOAD AMPS	APPROX WT-LBS
3/8	0.28	22	3.4-33	75	315	IDGM2509	1.5	22
3/8	0.28	28	4.5-41	60	252	IDGM2508	1.5	22
3/8	0.28	41	6.6-62	40	228	IDGM2506	1.5	22
3/8	0.28	83	12-123	20	138	IDGM2503	1.5	22
3/8	0.28	165	23-246	10	105	IDGM2501	1.5	22
3/8	0.28	330	43-490	5	68	IDGM2500	1.5	22

Performance Data 230 Volt Ratings - Parallel Shaft - TEFC Enclosure

HP	KW	OUTPUT BASE SPEED	SPEED RANGE	GEAR RATIO	MAX TORQ lb.-in.	CATALOG NUMBER	FULL LOAD AMPS	APPROX WT-LBS
3/8	0.28	55	8-82	30	350	IDGMP2506	1.5	20
3/8	0.28	83	12-123	20	223	IDGMP2503	1.5	20
3/8	0.28	165	23-246	10	116	IDGMP2501	1.5	20
3/8	0.28	330	43-490	5	58	IDGMP2500	1.5	20

For Dimensions refer to page 30

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 & receptacle 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 a TENV or TEBC Inverter Drive Motor (except paint-free washdown and explosion proof).
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
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 B3 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



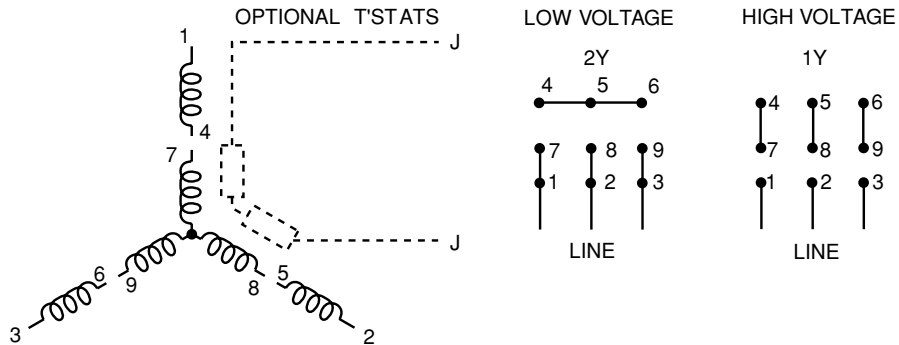
NorthStar HS35 Magnetic Pulse Generator



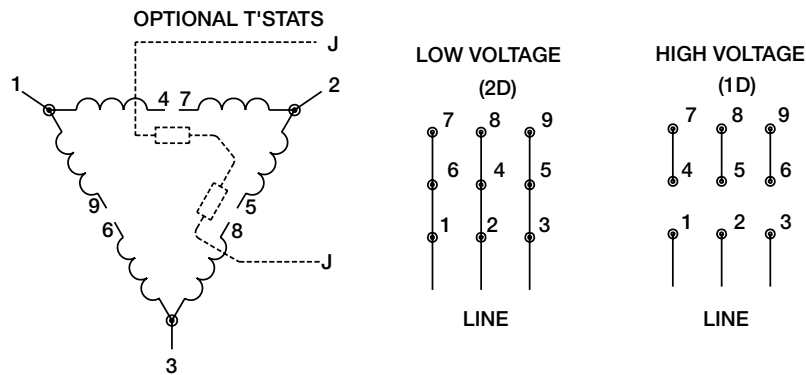
Typical feedback mounting shaft opposite pulley end

Connection Diagrams Main Motor Power Leads

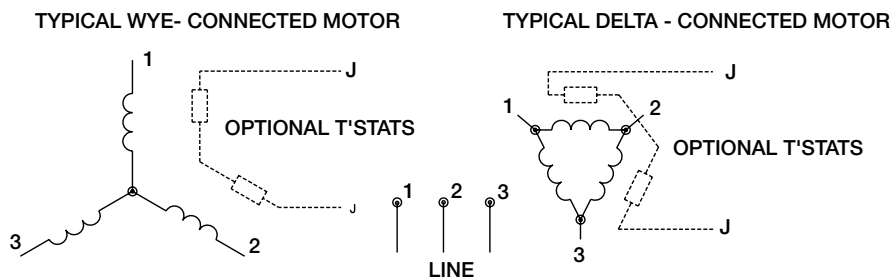
9 Lead Wye-Connected Motor



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 SPECIFICATIONS					
	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* 207/415	3	60 50	0.4/0.25 0.46/0.27
254/256TC						
284/286TC						
324/326TC						
364/365TC						
404/405TC	0.20		230/460* 207/415	3	60 50	0.68/0.33 0.7/0.38
444/445TC						
447-449TC						
5007L						
5009L	CONSULT BALDOR					
5810						

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

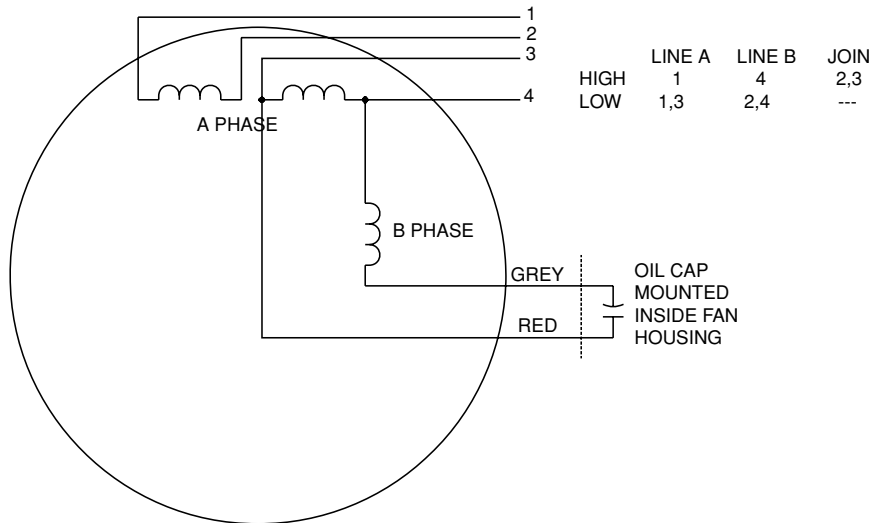
Blower Motor housing and mounting hardware for spare units or different power supplies.

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

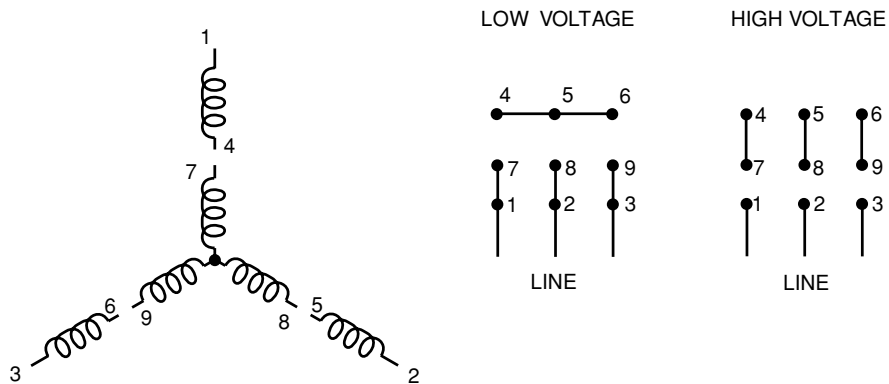
Note: Contact Baldor for information for blower information on 449T, 5000, and 5800 frames.

Connection Diagrams Blower Motor

Single Phase



Three Phase



Note:

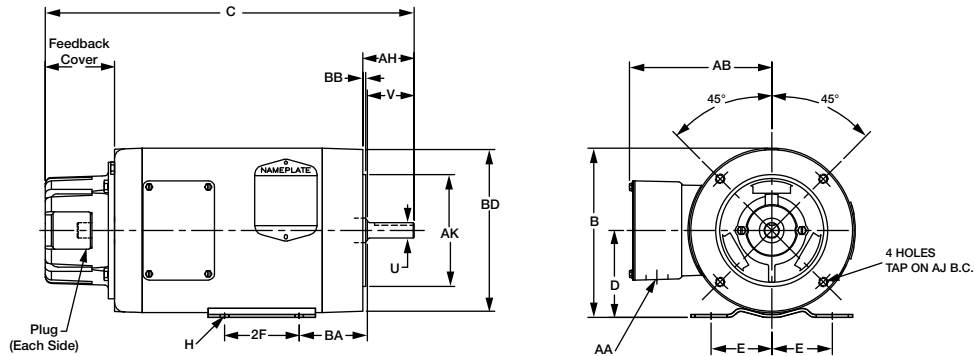
Single Phase: CCW from Opposite Drive End of fan motor.

Three Phase: Interchange any two line leads to reverse rotation to direct air flow.

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.

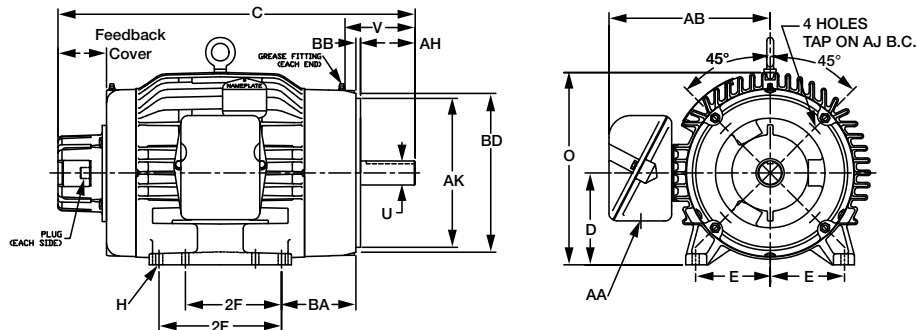
Dimensions

TENV Inverter Drive® and Washdown Motors - Steel Band Construction



NEMA FRAME	Feedback Shaft Exten. Cover	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
56C	2.78	3.50	2.44	3.00	0.34	2.06	6.81	5.73	2.75	0.625	1.88	6.51	4.50	5.88	3/8-16	0.88	0.13
143TC 145TC	2.78	3.50	2.75	4.00 5.00	0.34	2.12	6.81	5.73	2.75	0.875	2.25	6.51	4.50	5.88	3/8-16	0.50 NPT	0.12
182TC 184TC	2.78	4.50	3.75	4.50 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	0.75 NPT	0.25
213TC 215TC	2.78	5.25	4.25	5.50 7.00	0.41	3.12	10.03	8.05	4.25	1.375	3.38	9.04	8.50	7.25	1/2-13	0.75 NPT	0.25
254TC 256TC	1.79	6.25	5.00	8.25 10.00	0.53	3.75	12.00	9.72	4.75	1.625	4.00	9.44	8.50	7.25	1/2-13	1.25 NPT	0.25

TENV Inverter Drive® and Vector Drive® Motors - Cast Iron Construction

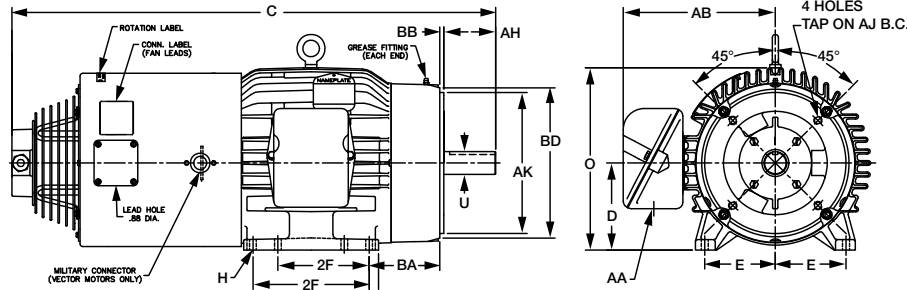


NEMA FRAME	Thru Shaft Exten. Cover	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC 145TC	2.78	3.50	2.75	4.00 5.00	0.38	2.12	7.59	6.43	2.75*	0.875	2.25	6.48	4.50	5.88	3/8-16	1.09	0.13
182TC 184TC	2.78	4.50	3.75	4.50 5.50	0.41	2.63	9.23	7.18	3.50	1.125	2.75	8.87	8.50	7.25	1/2-13	1.09	0.25
213TC 215TC	2.78	5.25	4.25	5.50 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 256TC	1.75	6.25	5.00	8.25 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
284T 286T	1.75	7.00	5.50	9.50 11.00	0.53	4.74	14.44	13.12	4.75	1.875	4.62					2.00	

Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information. *Non-Nema BA dimension.

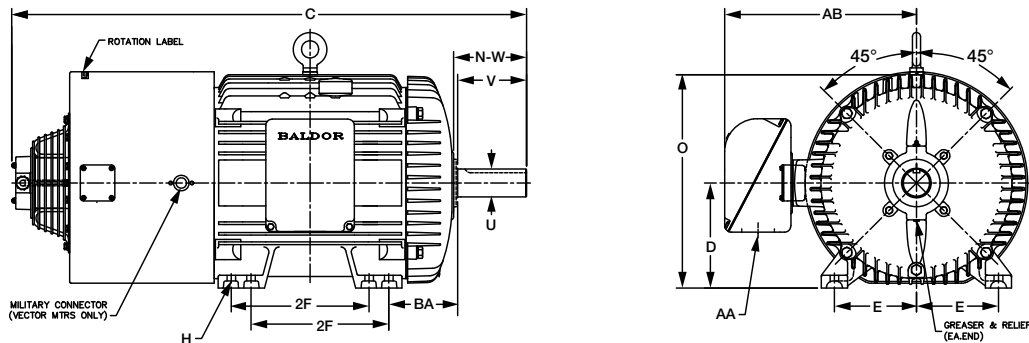
Dimensions

TEBC Inverter Drive® and Vector Drive® Motors - Cast Iron Construction with C-Face and Base



NEMA FRAME	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA	BB
143TC 145TC	3.50	2.75	4.00 5.00	0.38	2.12	7.59	6.37 6.43	2.75	0.875	2.25	6.48	4.50	5.88	3/8-16	1.09	0.13
182TC 184TC	4.50	3.75	4.50 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	1.09	0.25
213TC 215TC	5.25	4.25	5.50 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 256TC	6.25	5.00	8.25 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

TEBC Inverter Drive® and Vector Drive® Motors - Cast Iron Construction - Base

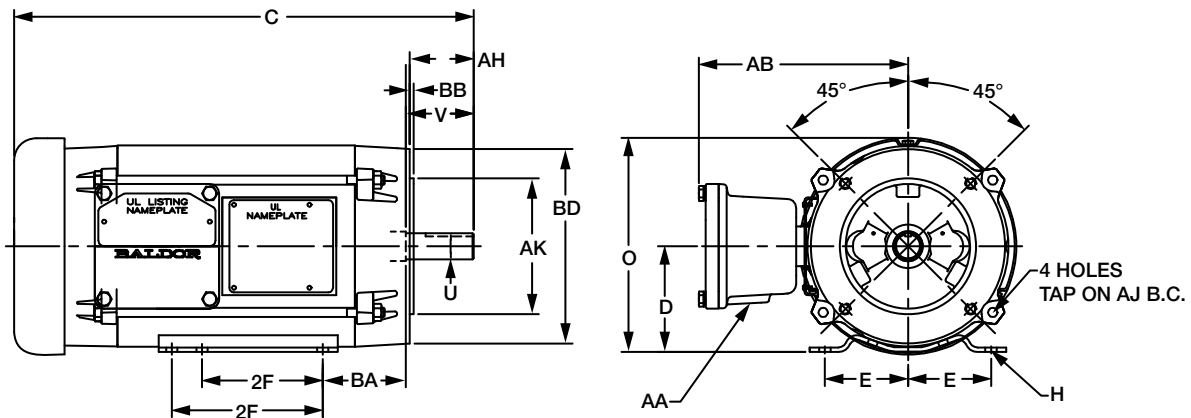


NEMA FRAME	D	E	2F	H	N	O	AB	BA	U	V	AA
284T 286T	7.00	5.50	9.50 11.00	0.53	4.74 4.38	14.44	13.12	4.75	1.875	4.63	2.00
324T 326T	8.00	6.25	10.50 12.00	0.66 0.53	5.56 5.00	16.25	14.62	5.25	2.125	5.25	2.50
364T 365T	9.00	7.00	11.25 12.25	0.66	6.12 5.63	18.38	14.97	5.88	2.375	5.88	3.62
404T 405T	10.00	8.00	12.25 13.75	0.81	7.50 7.00	20.31	18.78	6.62	2.875	7.25	3.63
444T 445T	11.00	9.00	14.50 16.50	0.81	8.93 8.25	22.85	20.43	7.50	3.375	8.50	3.62
445T 447T	11.00	9.00	16.50 20.00	0.81	8.93 8.25	22.85	20.45	7.50	3.375	8.50	3.00
447T 449T	11.00	9.00	20.00 25.00	0.81	8.94 8.25	22.94	21.71	7.50	3.375	8.50	3.00
5007L	12.50	10.00	18.00 20.00 22.00	0.94	11.62	26.84	26.88	8.50	3.875	11.12	4.00 NPT
5009L	12.50	10.00	25.00 28.00	0.94	11.62	26.84	26.88	8.50	3.875	11.12	4.00 NPT

Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information.

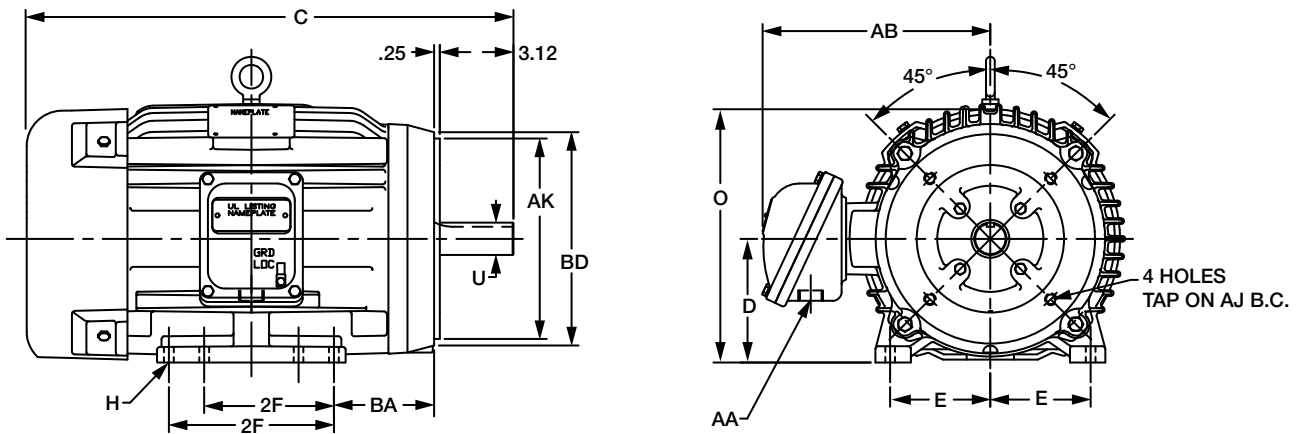
Dimensions

TEFC Inverter Drive® Explosion-Proof Motors - Rolled Steel Construction - C-Face



NEMA FRAME	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA NPT	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	0.13
143TC 145TC	3.50	2.75	4.00 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	0.75	0.13

TEFC Inverter Drive® Explosion-Proof Motors - Cast Iron Construction - C-Face

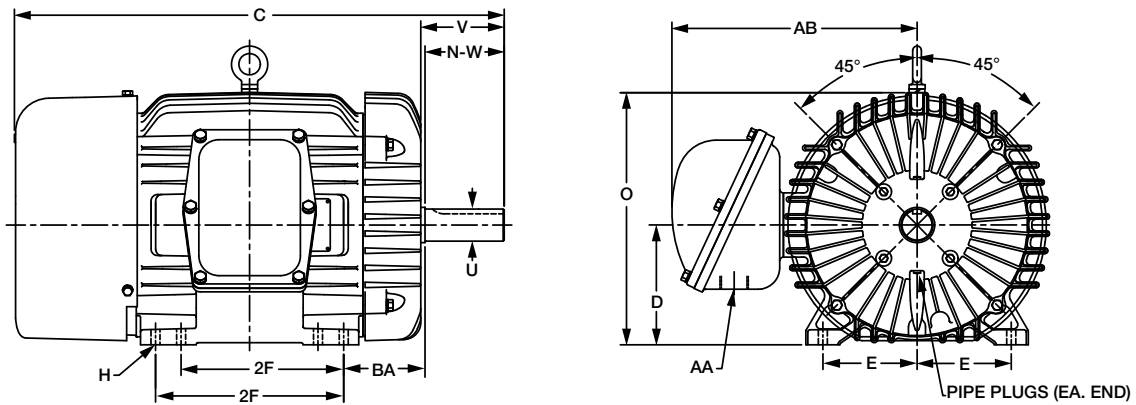


NEMA FRAME	D	E	2F	H	AH	O	AB	BA	U	V	BD	AK	AJ	TAP	AA NPT	BB
182TC 184TC	4.50	3.75	4.50 5.50	0.41	2.62	9.56	8.55	3.50	1.125	2.75	8.96	8.50	7.25	1/2-13	0.75	0.13
213TC 215TC	5.25	4.25	5.50 7.00	0.41	3.12	10.75	9.66	4.25	1.375	3.37	9.05	8.50	7.25	1/2-13	0.75	0.25
254TC 246TC	6.25	5.00	8.25 10.00	0.53	3.75	12.94	11.25	4.75	1.625	4.00	9.13	8.50	7.25	1/2-13	1.25	0.25

Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information.

Dimensions

TEFC Inverter Drive® Explosion-Proof Motors - Cast Iron Construction, Non C-Face

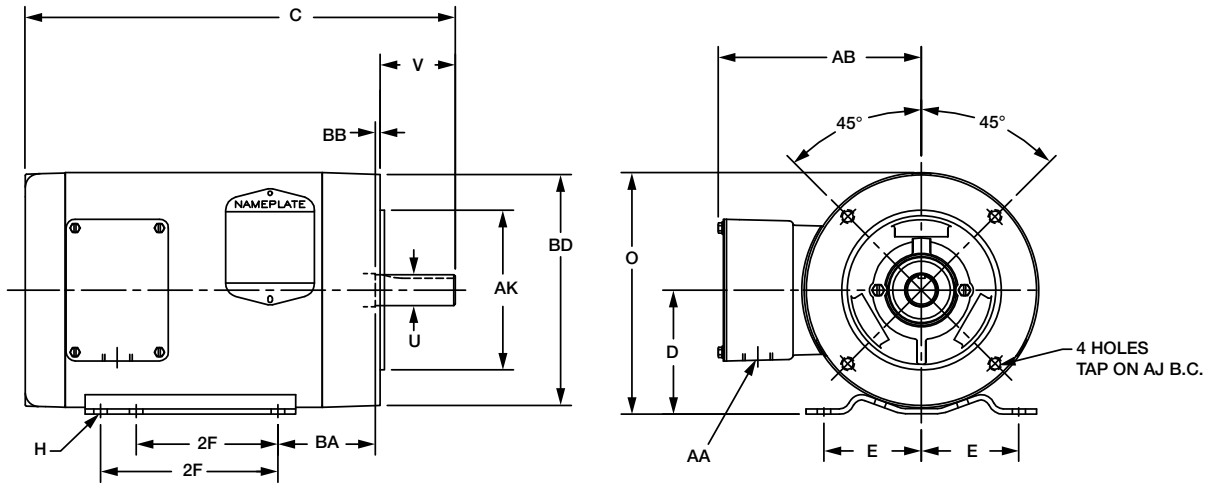


NEMA FRAME	D	E	2F	H	N-W	O	AB	BA	U	V	AA NPT
284T 286T	7.00	5.50	9.50 11.00	0.53	4.88	14.74	14.32	4.75	1.875	4.63	1.25
324T 326T	8.00	6.25	10.50 12.00	0.66	5.44	16.68	15.18	5.25	2.125	5.25	1.50
364T 365T	9.00	7.00	11.25 12.25	0.66	6.13	18.50	17.60	5.88	2.375	5.88	2.50
404T 405T	10.00	8.00	12.25 13.75	0.81	7.56	20.88	18.73	6.62	2.875	7.25	2.50

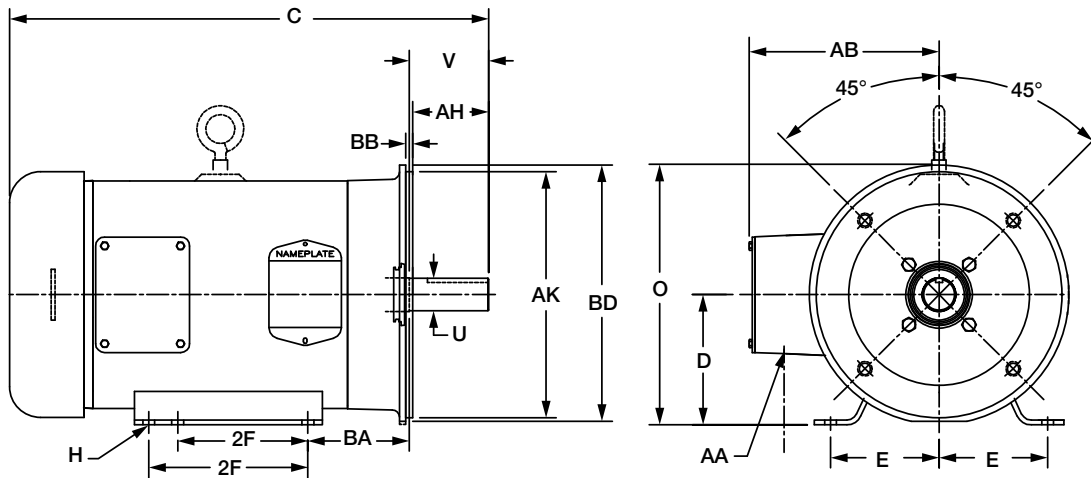
Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information.

Dimensions

TENV Washdown Paint Free Inverter Drive® Motors



TEFC Washdown Paint Free Inverter Drive® Motors

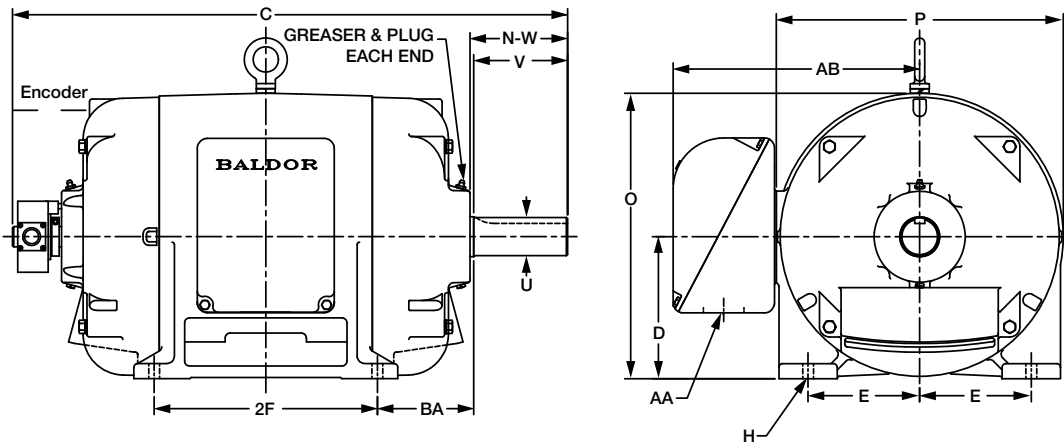


NEMA FRAME	D	E	2F	H	N	O	P	U	V	AA	AB	AH	AJ	AK	BA	BB	BD	XO	TAP
56	3-1/2	2-7/16	3	11/32 SLOT	2-7/16	6-7/8	6-5/8	5/8	1-7/8	1/2	5	2-1/16	5-7/8	4-1/2	2-3/4	1/8	6-1/2	2-1/4	3/8-16
143T 145T	3-1/2	2-3/4	4 5	11/32 SLOT	2-1/2	6-7/8	6-5/8	7/8	2-1/4	3/4	5-1/4	2-1/8	5-7/8	4-1/2	2-1/4	1/8	6-1/2	2-1/4	3/8-16
182T 184T	4-1/2	3-3/4	4-1/2 5-1/2	13/32	3-9/16	8-11/16	7-7/8	1-1/8 1-1/8	2-3/4 2-3/4	3/4	5-7/8	2-5/8 2-5/8	7-1/4 7-1/4	8-1/2 8-1/2	2-3/4	1/4 1/4	9 9	2-3/8	1/2-13 1/2-13
213T 215T	5-1/4	4-1/4	5-1/2 7	13/32	3-7/8	10-1/4	9-9/16	1-3/8 1-3/8	3-3/8 3-3/8	3/4	7-3/8	3-1/8 3-1/8	7-1/4	8-1/2	3-1/2	1/4	9	2-3/4	1/2-13

Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information. These motors are not designed to have an encoder added.

Dimensions

ODP Elevator Vector Drive® Motors

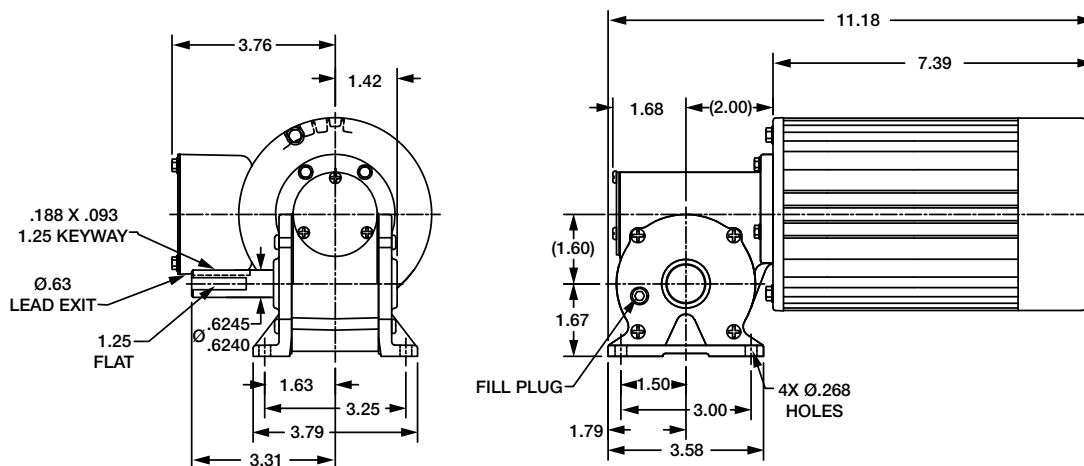


NEMA FRAME	C	ENCODER	D	E	2F	H	N-W	O	P	U	V	AA	AB	BA
256T	24.70	2.80	6.25	5.00	10.00	0.53	4.22	12.54	12.87	1.625	4.00	1.38	10.29	4.25
286T	27.35	2.80	7.00	5.50	11.00	0.53	4.81	14.07	14.14	1.875	4.63	2.00	12.15	4.75
324T	28.54	2.80	8.00	6.25	10.50	0.66	5.38	16.10	16.21	2.125	5.25	2.50	13.20	5.25
326T	30.04	2.80	8.00	6.25	12.00	0.66	5.38	16.10	16.21	2.125	5.25	2.50	13.20	5.25
364T-365T	32.49	2.80	9.00	7.00	11.25 & 12.25	0.66	6.06	18.18	18.35	2.375	5.88	3.63	15.01	5.88
404T-405T	36.80	2.80	10.00	8.00	12.25 & 13.75	0.81	7.50	20.14	20.89	2.875	7.25	3.00	17.58	6.62

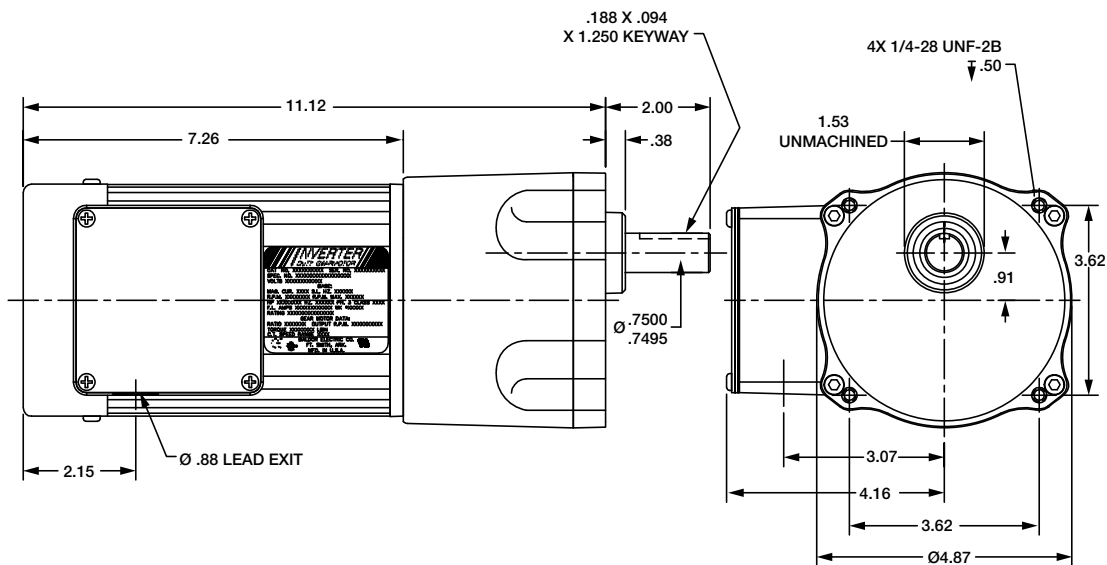
Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information.

Dimensions

Right Angle Inverter Drive® Gearmotor



Parallel Shaft Inverter Drive® Gearmotor



Note: Dimensions are for reference only. Refer to specific layout drawing for detailed dimensional information.

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.

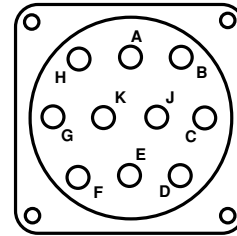
CATALOG NO.	CABLE LENGTH	APPROX. WEIGHT
CBL015ZD-2	5 FEET = 1.5 METERS	2
CBL030ZD-2	10 FEET = 3.0 METERS	2
CBL046ZD-2	15 FEET = 4.6 METERS	4
CBL061ZD-2	20 FEET = 6.1 METERS	5
CBL091ZD-2	30 FEET = 9.1 METERS	7
CBL152ZD-2	50 FEET = 15.2 METERS	10
CBL229ZD-2	75 FEET = 22.9 METERS	14
CBL305ZD-2	100 FEET = 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 (+)
A	H	VIOLET	SINE (-)
B	B	YELLOW	COS (+)
B	J	ORANGE	COS (-)
Z (or C)	C	BLUE	-
Z (or 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.

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

AC Motor Adjustable Speed Range Capabilities

Inverter Drive® and Vector Drive® Motors

Baldor Inverter Drive® and Vector Drive® Motors exceed all requirements of NEMA MG1 Parts 30 and 31 for AC induction motors powered from adjustable speed controls. Definite-Purpose Inverter-Fed Polyphase Motors, as defined for Inverter Drive Motors are suitable for variable torque applications and rated 1000:1 for constant torque (except for those Inverter Duty motors rated for use in hazardous locations). Vector Drive motors are capable of full, rated torque at 0 RPM, continuous duty. Satisfactory motor performance depends on proper drive setup.

It is necessary that motor-drive applications are commissioned by persons familiar with the operation and setup of adjustable speed drives, applicable electrical codes and any other regulations. Each drive must be tuned to the motor for the specific application. System operating parameters must be checked, including voltage at motor power leads, to insure that motor/drive set up has been successfully completed. Applications that are not properly set up can lead to substandard performance and failure of system components.

Super-E® Motors

All Baldor Super-E motors are Inverter-Ready and meet NEMA MG 1 Part 31.4.4.2. Super-E motors are suitable for use with inverter drives in applications with variable torque and with a constant torque 20:1 speed range except as noted below. Motor-



inverter setup is unique to each specific application. Setup and correct wiring procedures must be closely followed.

Standard-E® Motors

Baldor Standard-E® EPAct efficient motors are suitable for use in adjustable speed applications per NEMA MG 1 Part 30. With proper motor-inverter setup, Standard-E motors are suitable for use at 20:1 variable torque and 4:1 constant torque applications.

Note: Use of explosion proof motors with inverters should be limited to Inverter-Duty Explosion proof motors only.

Baldor Super-E Motors 230, 460 and 575 Volts

Family	Frame Size	Constant Torque	Variable Torque	Comments
EM (TEFC)	143 – 365	20:1	20:1	General Purpose Premium Efficiency
	404 – 449	10:1	20:1	
EM (ODP)	143 – 445	20:1	20:1	General Purpose Premium Efficiency
ECP	143 – 365	20:1	20:1	Severe Duty Premium Efficiency
	404 – 449	10:1	20:1	
ECP8 (IEEE841)	143 – 365	20:1	20:1	Severe Duty Premium Efficiency May not meet temp rise as specified in IEEE841 when used with ASD.
	404 – 449	10:1	20:1	
EWDM	143 – 215	20:1	20:1	Washdown Duty Premium Efficiency

Baldor Standard-E Motors 230, 460 and 575 Volts

Family	Frame Size	Constant Torque	Variable Torque	Comments
M (TEFC)	143 – 5009	4:1	20:1	General Purpose
M (ODP)	143 – 5009	4:1	20:1	General Purpose
CP	143 – 405	4:1	20:1	Severe Duty
WDM	56 – 215	4:1	20:1	Washdown Duty

Baldor Inverter Duty and Vector Duty Motors 230, 460 and 575 Volts

Family	Frame Size	Constant Torque	Variable Torque	Comments
IDM (TEBC)	143 – 5009	1000:1	1000:1	Inverter Duty/Blower cooled
IDNM (TENV)	143 – 256	1000:1	1000:1	Inverter Duty/Non-Vented
ZDM (TEBC)	143 – 5009	1000:1	1000:1	Vector Duty/Blower Cooled
ZDNM (TENV)	143 – 256	1000:1	1000:1	Vector Duty/Non Vented
IDXM (2 families)	182 – 405	2:1	10:1	Explosion Proof Inverter Duty
	56 – 405	10:1	10:1	
IDWNM	143 – 254	20:1	1000:1	Washdown Duty Inverter Duty/Non Vented
ZDWNM	143 – 254	1000:1	1000:1	Washdown Duty Vector Duty/Non Vented

Baldor Custom Motors



Need Custom Motors Shipped in Two Weeks? Not a Problem!

Why wait forever for your custom motor order to arrive when Baldor can turn your order around in 2 weeks?

Because we're always ready for your custom motor order, from 1 to 1,000, you can expect the fastest delivery in the industry. Whether you need **special flange, foot or face-mount configurations, custom shafts, special windings and performance requirements... even custom colors and nameplates.** You spec it and we'll build it.

Start with the fact that all of our motors are made in the USA, add in our exclusive Flex Flow manufacturing and your pre-spec'd order in any quantity will leave our factory in 2 weeks.

Contact your nearest Baldor District Office for custom motor assistance from our experienced sales and application staff. Baldor can supply custom motors built the way you want them, when you want them.

Custom motors. Two weeks.



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FAX: 602-470-0464

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1001 COLLEGE AVE.
CLARKSVILLE, AR 72830
PHONE: 479-754-9108
FAX: 479-754-9205

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PHONE: 323-724-6771
FAX: 323-721-5859

HAYWARD
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PHONE: 510-785-9900
FAX: 510-785-9910

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DENVER
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PHONE: 303-623-0127
FAX: 303-595-3772

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INDIANA

INDIANAPOLIS
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FAX: 317-246-5110
800-428-4141

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FAX: 515-263-6515

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FAX: (61) (3) 9753 4366

AMÉRICA DEL SUR

APTDO. 9109 0818 ZONA 6
BETHANIA,
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PHONE: +507 261-5347
FAX: +507 261-5355

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FAX: +503 2288-1518

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International Fax (479) 648-5895

www.baldor.com