Kollmorgen PMDC Motors Selection Guide

Permanent Magnet DC Motors

KOLLMORGEN®

Because Motion Matters™

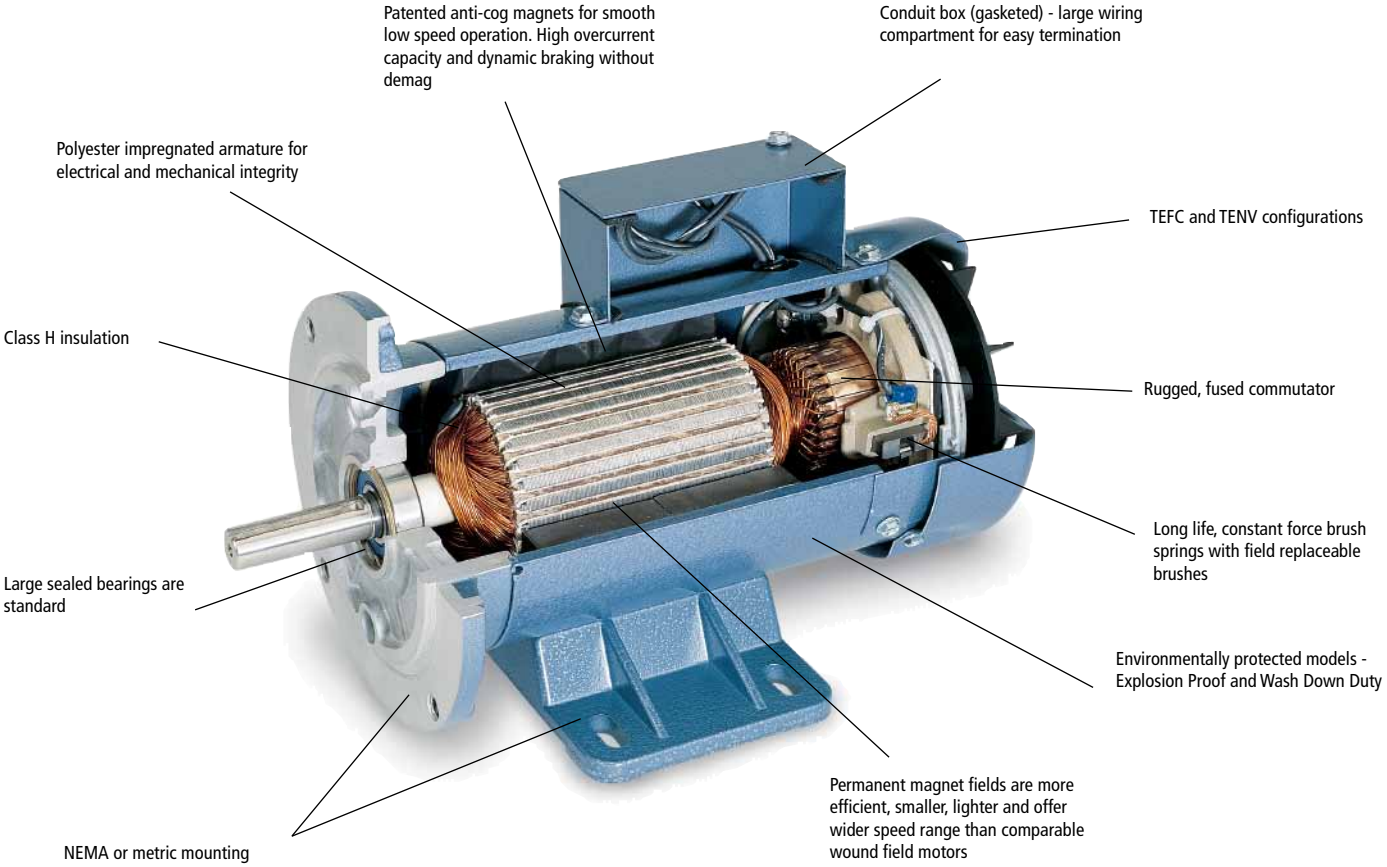
Welcome to Kollmorgen...
helping you build a better machine, faster

Permanent Magnet DC Motors
Why have numerous industries depended on Kollmorgen's Permanent Magnet (PMDC) motors for years?

Value and performance. Rugged, quality construction, backed by a 2 year warranty. More than 40 standard models from 1/4 to 3 HP.

Look under the nameplate and discover the Kollmorgen differences. These differences account for a diverse base of satisfied customers who have very successfully applied these motors in thousands of different applications.

Kollmorgen
With over 80 years of motion control experience in component manufacturing and system design, Kollmorgen has a world of standard and custom solutions for your motion control problems. We deliver high performance motor and drive technology and engineering expertise. In addition to Permanent Magnet DC(PMDC) motors, Kollmorgen's major product lines include hybrid stepper motors and drives, brushless servomotors and drives, low inertia servomotors and DC-powered generators. Kollmorgen is committed to providing its customers with high performance, quality products that can be tailored to match their exact needs, with the highest level of support.



Permanent Magnet DC Motors Selection Guide

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Modification Capabilities – Custom Motors

This catalog includes the industrial standard PMDC motors that we offer. We also offer a wide variety of custom features to meet your specific requirements. Need a special foot, shaft, or winding? These are very common specials. We also offer much more detailed customizations. Our applications engineers routinely make electrical and/or mechanical modifications to optimize motors to meet your specific requirements. Contact your nearest authorized distributor.

SCR Rated NEMA Standards

1/8 - 1 HP, 90 VOLT - 1750 RPM

NEMA C face with removable base. Class H insulation. UL Recognized (UL 1004, File E61960) and CSA Certified (CSA Standard C22.2 No. 100, Class 421101, File LR43477). All TEFC motors accept tachometer adapter kits. See facing page and page 11. User supplied GE, Servo-Tek, and Baldor tachometers are easily mounted to the adapter.

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/8	SR3616-8290-7-56BC-CU	FGS2430	56C	TENV	1.5	4.5	34.0	4.0	5.3	2.9	19.4	1	8.13	14	YP00565
1/4	SR3624-8291-7-56BC-CU	FGS2431	56C	TENV	2.7	9.0	54.0	3.9	2.5	4.0	9.6	1	9.13	18	YP00565
1/3	SR3632-8292-7-56BC-CU	FGS2432	56C	TENV	3.5	12.0	71.0	3.9	1.8	5.0	6.6	1	10.13	21	YP00565
1/2	SR3642-4822-7-56BC-CU	FGS2434	56C	TENV	4.7	18.0	74.0	4.2	0.9	6.5	3.8	1	12.10	27	YP00565
1/2	SRF3632-5227-84-5-56BC-CU*	FGS2748	56C	TEFC	5.1	18.0	54.0	4.0	1.3	5.2	5.8	2	10.10	22	YP00565
3/4	SRF3650-4823-84-5-56BC-CU*	FGS2749	56C	TEFC	6.9	27.0	81.0	4.2	0.7	7.8	3.7	2	13.25	30	YP00565
1.0	SRF3756-4996-84-5-56BC-CU*	FGS2751	56C	TEFC	9.5	36.0	81.0	4.4	0.5	12.8	3.4	2	13.25	30	YP00565

*CE marked. Conforms to EN60034-1 and EN60034-5

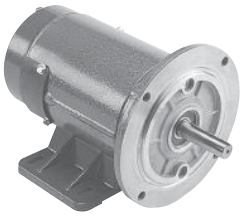
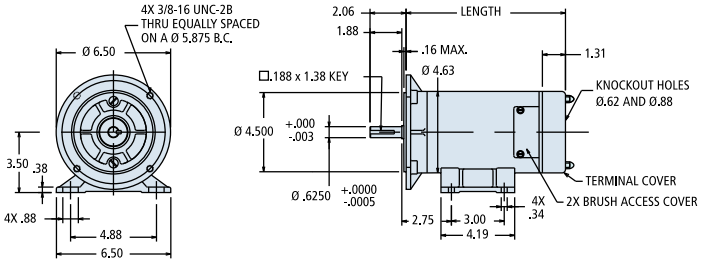
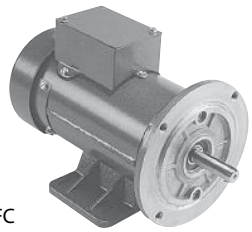
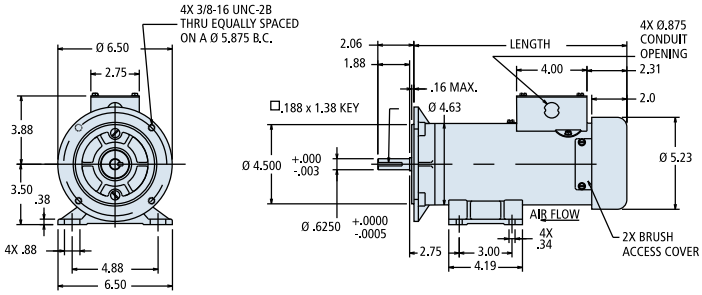
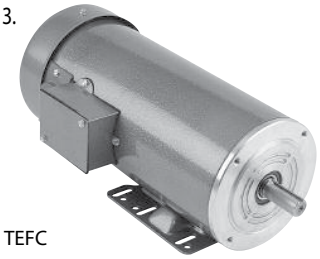
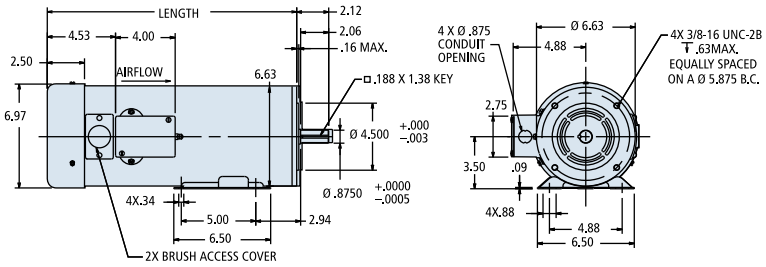
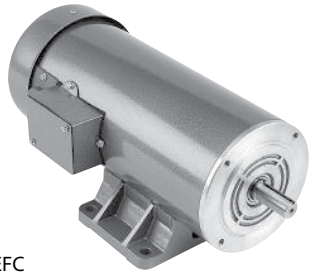
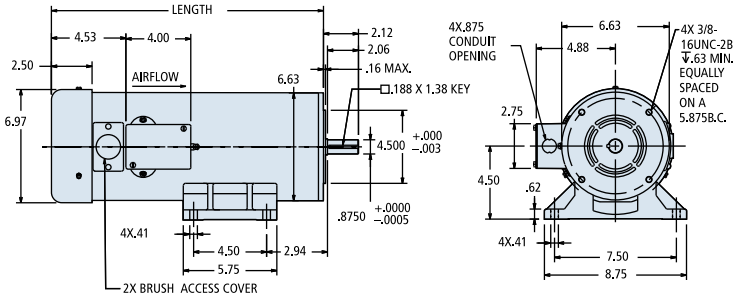
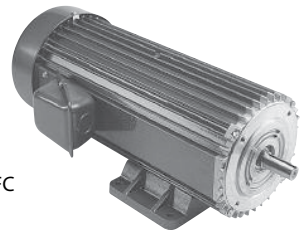
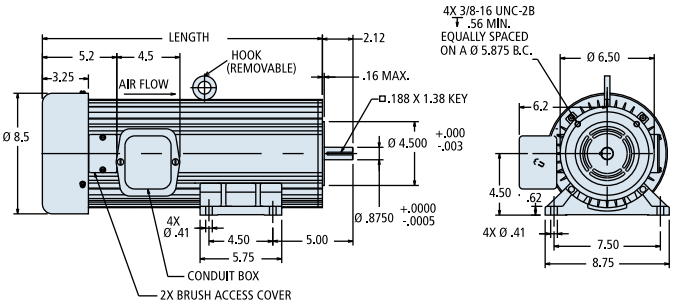
1/4 - 3 HP, 180 VOLT - 1750 RPM

NEMA C face with removable base (except 1.5 HP— welded base**). Class H insulation. UL Recognized (UL 1004, File E61960) and CSA Certified (CSA Standard C22.2 No. 100, Class 421101, File LR43477). All TEFC motors accept tachometer adapter kits. See facing page and page 11. User supplied GE, Servo-Tek, and Baldor tachometers are easily mounted to the adapter.

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	SR3624-1032-7-56BC-CU	FGS2658	56C	TENV	1.4	9.0	28.0	7.4	9.6	4.0	42.8	1	9.13	18	YP00566
1/2	SR3642-4982-7-56BC-CU	FGS2438	56C	TENV	2.6	18.0	40.0	7.6	3.3	6.3	16.2	1	12.13	27	YP00566
1/2	SRF3632-5265-84-5-56BC-CU*	FGS2735	56C	TEFC	2.4	18.0	27.0	8.1	5.3	5.2	29.5	2	10.10	21	YP00566
3/4	SRF3736-4983-84-5-56BC-CU*	FGS2750	56C	TEFC	3.2	27.0	26.0	8.8	3.6	8.9	28.8	2	11.25	23	YP00566
1.0	SRF3752-4984-84-5-56BC-CU*	FGS2752	56C	TEFC	4.6	36.0	41.0	8.2	1.8	12.0	15.6	2	13.25	29	YP00566
1.5	SRF5348-4485-84-5-45BC-CU*	FGS2753	145TC**	TEFC	7.8	54.0	62.0	7.9	1.2	26.2	13.5	3	16.00	64	YP00574
2.0	SRF5360-4985-84-5-82BC-CU*	FGS2754	145TC/182	TEFC	9.5	72.0	78.0	8.2	0.6	35.9	7.0	4	16.50	75	YP00559
3.0	SRF5570-4986-84-5-82BC-CU*	FGS2755	145TC/182	TEFC	14.0	108.0	78.0	9.3	0.6	40.1	7.2	5	19.75	87	YP00585

*CE marked. Conforms to EN60034-1 and EN60034-5
**Stamped steel, welded base, not removable

SCR Rated NEMA Standards

Configurations	Dimensions (inches)	Tachometer Adapter Kits (see pg. 10)
1.  TENV		NA
2.  TEFC		FGZ9054 or FGZ9060
3.  TEFC		FGZ9055 or FGZ9058
4.  TEFC		FGZ9055 or FGZ9058
5.  TEFC		FGZ9056 or FGZ9059

SCR Rated NEMA Stadards WASH DOWN DUTY

1/4 - 1 HP, 90 VOLT - 1750 RPM

NEMA C face with removable base (except 1 HP— welded base*). Class H insulation. UL Recognized (UL 1004, File E61960). Comply with NEMA MG1-1.26.5 Waterproof designation and IP65. Bakery Industry Sanitation Standards Committee (BISSC) certified per BISSC Standard 29 (Authorization No. 301).

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	STF3624-4976-61-56BC	FGS2419	56C	TENV	2.9	9.0	54.0	3.89	2.51	4.0	9.61	1	11.20	22	YP00572
1/2	STF3640-4977-61-56BC	FGS2420	56C	TENV	5.1	18.0	67.0	4.05	0.95	6.3	4.38	1	12.20	26	YP00572
3/4	STF3758-5150-61-56BC	FGS2757	56C	TENV	7.3	27.0	126.0	4.05	0.72	8.7	3.50	2	15.20	41	YP00572
1	STF5332-3747-61-56BC	FGS1751	56C*	TENV	9.2	36.0	67.0	3.98	0.61	22.4	8.00	3	13.30	41	YP00574

*Stamped steel, welded base, not removable

1/2 - 2 HP, 180 VOLT - 1750 RPM

NEMA C face with removable base (except 1.0 & 1.5 HP— welded base*). Class H insulation. UL Recognized (UL 1004, File E61960). Comply with NEMA MG1-1.26.5 Waterproof designation and IP65. Bakery Industry Sanitation Standards Committee (BISSC) certified per BISSC Standard 29 (Authorization No. 301).

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/2	STF3648-5268-61-56BC	FGS2738	56C	TENV	2.4	18.0	37.0	8.30	3.59	6.4	19.60	1	11.80	27	YP00571
1	STF5332-3748-61-56BC	FGS2389	56C*	TENV	4.6	36.0	36.0	8.00	2.40	22.4	32.00	3	13.30	41	YP00574
1.5	STF5356-3749-61-45BC	FGS2390	145TC*	TENV	7.1	54.0	70.0	7.90	1.11	29.8	11.20	4	16.30	65	YP00574
2.0	STF5372-3750-61-82BC	FGS2342	145TC/182	TENV	9.3	72.0	93.0	7.90	0.77	39.3	6.80	5	18.30	84	YP00574

*Stamped steel, welded base, not removable

SCR Rated NEMA Stadards
WASH DOWN DUTY

Configurations **Dimensions (inches)**

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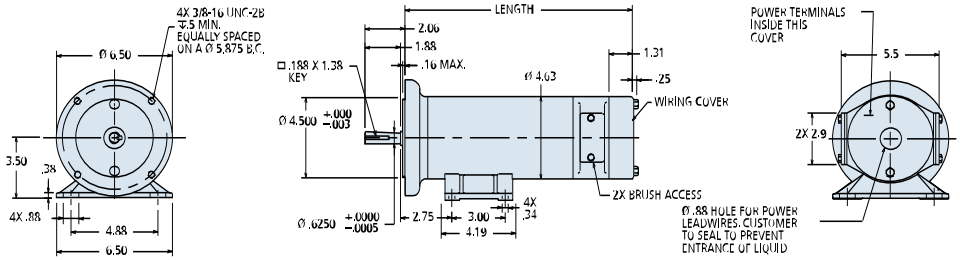

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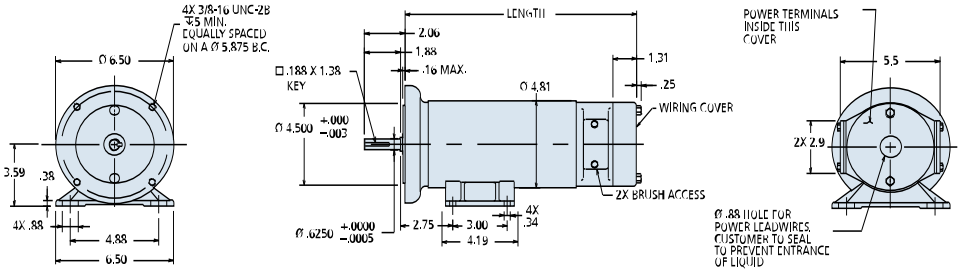

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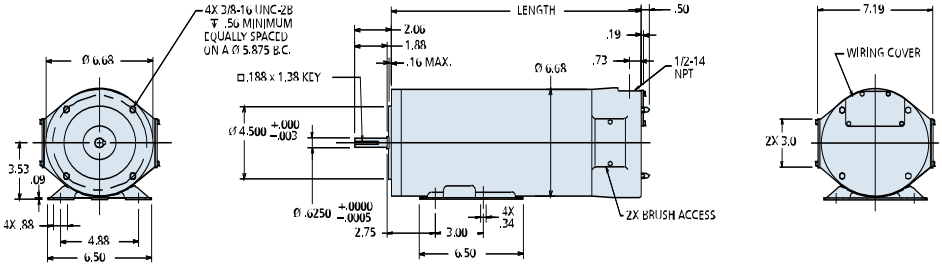

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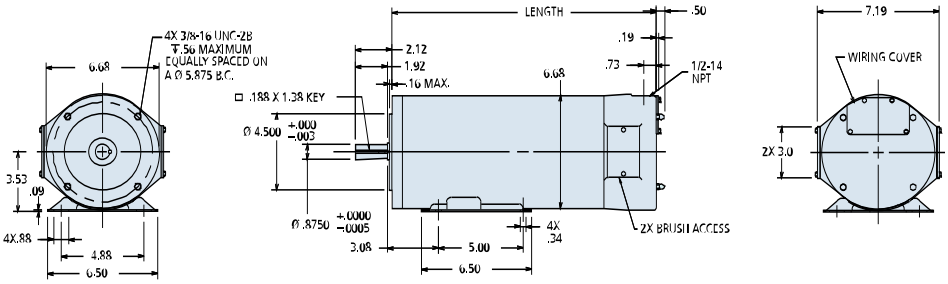

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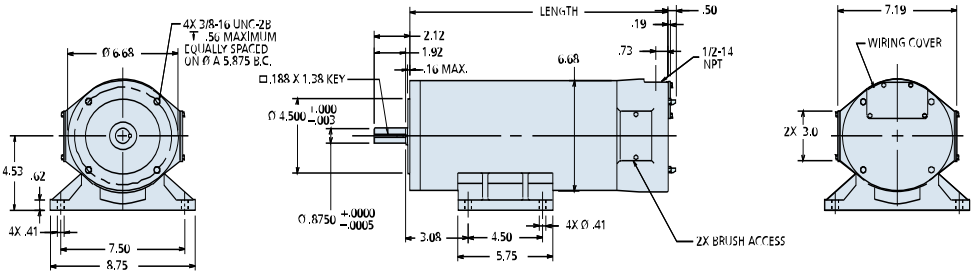


SCR Rated NEMA Stadards EXPLOSION PROOF

1/4 - 3/4 HP, 90 VOLT - 1750 RPM

NEMA C face with removable base. Class H insulation. UL Listed (UL674, File E56538), meet Division 1 and 2, Class 1 (Groups C and D), Class II (Groups F and G) and Class III. CSA Listed Components per CSA Standard C22.2 No. 145, Class 428801 (File LR43478).

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	EP3624-1434-7-56BC-CU	FGE0212	56C	TENV	2.6	9.0	52.0	4.07	2.63	4.0	10.5	1	10.38	23	YP00565
1/3	EP3632-1435-7-56BC-CU	FGE0242	56C	TENV	3.5	12.0	71.0	3.94	1.76	5.0	6.6	1	11.38	27	YP00565
1/2	EP3640-1436-7-56BC-CU	FGE0213	56C	TENV	4.7	18.0	87.0	4.24	1.03	6.4	5.1	1	12.38	30	YP00565
3/4	EP3758-5151-7-56BC-CU	FGE0248	56C	TENV	7.0	27.0	113.0	4.15	0.74	8.0	3.8	1	14.0	36	YP00565

1/4 - 3/4 HP, 180 VOLT - 1750 RPM

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	EP3624-5269-7-56BC-CU	FGE0261	56C	TENV	1.3	9.0	26.0	8.10	10.50	4.0	51.80	1	10.38	23	YP00566
1/2	EP3644-5214-7-56BC-CU	FGE0262	56C	TENV	2.3	18.0	34.0	8.10	4.00	6.7	24.20	1	12.38	30	YP00566
3/4	EP3752-5215-7-56BC-CU	FGE0263	56C	TENV	3.3	27.0	38.0	8.10	3.10	11.4	17.40	1	14.38	34	YP00566

1/3 HP, 12 VOLT - 1750 RPM

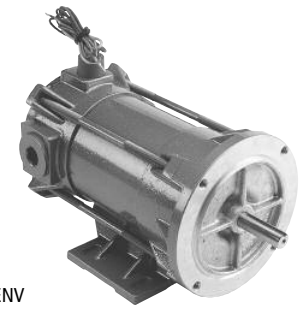
					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/3	EP3620-1954-7-56BC-CU	FGE0243	56C	TENV	28.0	12.0	n/a	.52	.04	3.5	.18	1	10.38	19	YP00583

1/3 - 3/4 HP, 24 VOLT - 1750 RPM

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/3	EP3624-2757-7-56BC-CU	FGE0245	56C	TENV	13.4	12.0	n/a	1.02	.16	4.0	.66	1	10.38	24	YP00593
3/4	EP3648-4952-7-56BC-CU	FGE0244	56C	TENV	28.2	27.0	n/a	1.02	.06	7.1	.22	1	13.38	33	YP00583

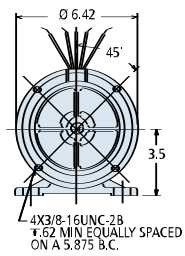
Configurations

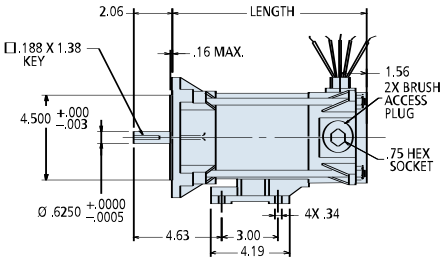
1.

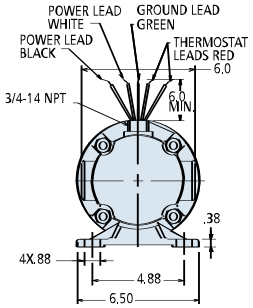


TENV

Dimensions (inches)







LOW VOLTAGE Rated NEMA STANDARDS

1/4 - 1/2 HP, 12 VOLT - 1750 RPM

NEMA C face with removable base. Class H insulation. UL Recognized (UL 1004, File E61960). Designed for use with low voltage supplies (batteries). Highly efficient. For constant speed, motors are operated directly from a battery with no motor control interface. For adjustable speed, low voltage motor controls are readily available.

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	BA3614-4648-9-56BC	FGB2010	56C	TENV	21.1	9.0	n/a	0.51	0.07	2.9	0.27	1	8.13	15	YP00593
1/3	BA3624-7005-9-56BC	FGB2002	56C	TENV	27.0	12.0	n/a	0.51	0.04	4.0	0.14	1	9.13	19	YP00582
1/2	BA3638-4588-9-56BC	FGB2005	56C	TENV	39.8	18.0	n/a	0.49	0.02	5.5	0.07	1	11.13	25	YP00592

1/4 - 1.0 HP, 24 VOLT - 1750 RPM

					Continuous Ratings		Parameters								
HP	Model Number	Product Code	NEMA Frame	Enclosure	Current (Amps)	Torque (lb-in.)	Current (Peak)	Torque Constant (lb-in./A)	Resistance (Ohms)	Inertia (lb-in.)	Inductance (Millihenries)	Configuration (facing page)	Length (in.)	Weight (lbs)	Brush Replacement (order 2 per motor)
1/4	BA3618-7009-9-56BC	FGB1592	56C	TENV	10.3	9.0	n/a	1.04	0.14	3.2	0.57	1	9.13	18	YP00593
1/3	BA3624-7024-9-56BC	FGB2285	56C	TENV	13.4	12.0	n/a	1.02	0.16	4.0	0.66	1	9.13	19	YP00593
1/2	BA3628-7012-9-56BC	FGB1441	56C	TENV	19.5	18.0	n/a	1.01	0.10	4.4	0.38	1	10.13	21	YP00593
3/4	BA3648-4650-9-56BC	FGB2006	56C	TENV	28.2	27.0	n/a	1.02	0.06	7.1	0.22	1	12.10	29	YP00592
1.0	BAF3644-5081-56BC	FGB2335	56C	TEFC	38.4	36.0	n/a	1.00	0.05	6.6	0.21	2	12.25	28	YP00583

Configurations

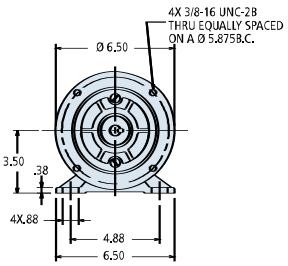
1.

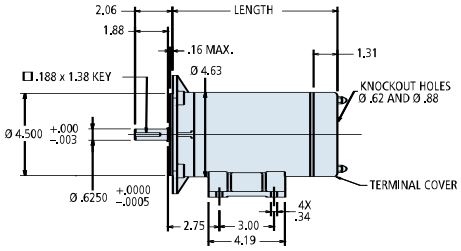
TENV

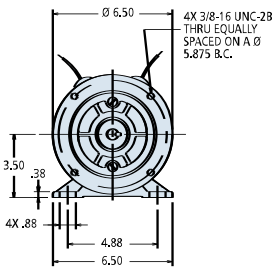
2.

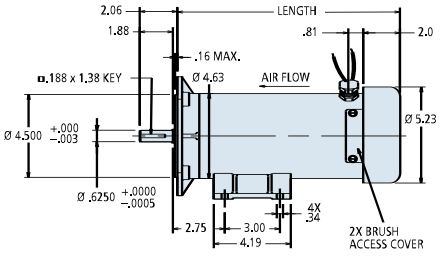
TEFC

Dimensions (inches)









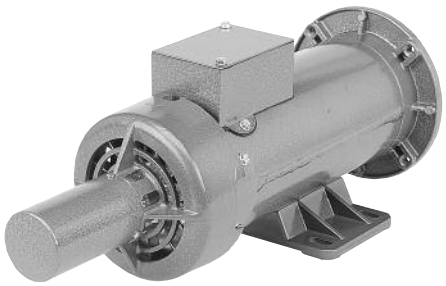
Tachometer Adapter Kits

Use to simply monitor motor speed with a readout or through control electronics to very accurately maintain the motor's set speed throughout a wide speed range. Kits include parts and instructions for easy mounting. User supplied GE, Servo-Tek, and Baldor tachometers are easily mounted to the adapter. Tachometer adaptor kits can only be applied to motors that have a "-84" in the motor P/N. The "-84" designates that the motor includes features to accept the adaptor. Contact the factory for applicability to other motors.

Motor Type	Motor Enclosure	*Small Tach Adaptor Kits	**Large Tach Adaptor Kits
SR36	TENV	40PA57-36/37-TENV-S	–
SRF36, SRF37	TEFC	40PA54-36/37-TEFC-S	40PA60-36/37-TEFC-G
SRF53	TEFC	40PA58-53-TEFC-S	–
SRF55	TEFC	40PA59-55-TEFC-S	40PA56-55-TEFC-G

* For Servo-Tek models SA-757A, SA-7103A and SA-7360-F-1 (7V/KRPM). Models with .120" dia. Shafts (rather than .187" dia.) can also be mounted using Servo-Tek coupling ST-9502-1

** For GE model 5PY or Baldor model BTG. See their specifications for voltage gradients.



3/4 HP TEFC motor with Servo-Tek tachometer installed.

1.5 HP TEFC motor with GE tachometer installed.

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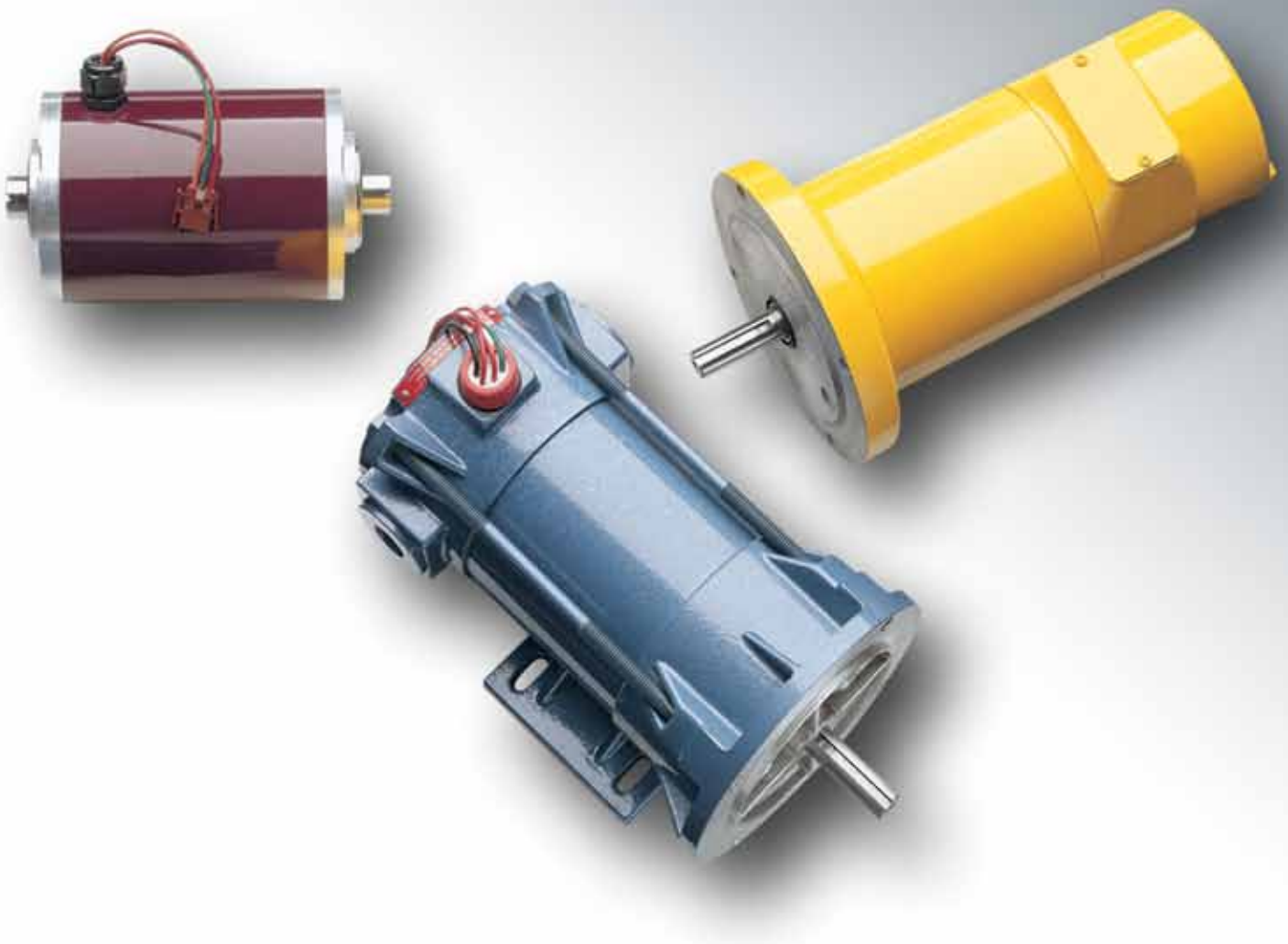

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Kollmorgen is a leading provider of motion systems and components for machine builders. Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions that are unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For assistance with your application needs in North America, contact us at: 540-633-3545, support@kollmorgen.com or visit www.kollmorgen.com for a global contact list.

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