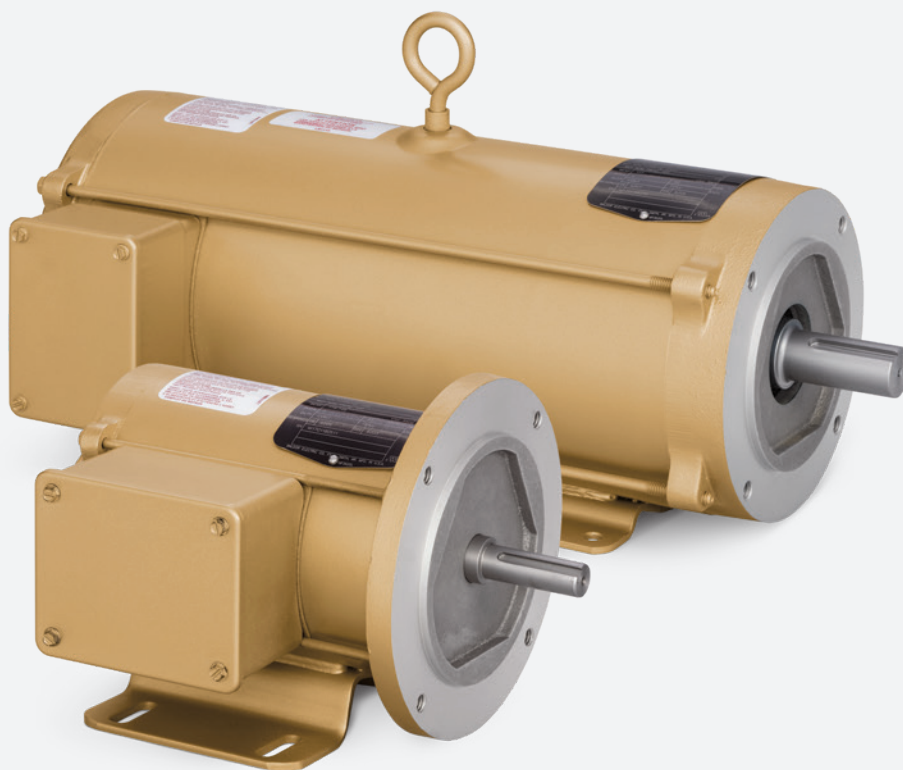


PRODUCT CATALOG

EC Gold Series

Synchronous permanent magnet motor





EC Gold Series

High performance in compact dimensions

The EC Gold series is a synchronous PM motor designed to be a highly efficient, compact package that is interchangeable with standard induction motors. All frame sizes meet NEMA dimensions for ease of installation and retrofitting. The platform is designed to be used with a brushless PM drive simplifying component replacement compared to similar integral solutions. The synchronous PM design offers excellent speed regulation with no feedback required and maintains high efficiency over a wider range of speed than traditional induction motors.

Many companies are searching for ways to lessen their impact on the environment and reduce their energy consumption. One way is to turn to more energy efficient motors as they consume almost one third of the worlds electrical energy.

As efficiency standards are pushed to higher and higher levels, we don't settle for meeting today's standards. We are designing for the next and achieving greater efficiencies (beyond IE4) utilizing permanent magnet (PM) motor technology.

EC Gold series motors are great for applications that require efficiency(IE4+) in a power dense package.

The EC style motor has a synchronous permanent magnet rotor. While PM motors have larger initial costs, savings are achieved from lifetime operating costs. Over the lifetime of a motor the initial purchase price only accounts for a few percent of the total cost of that motor. Approximately 92% of the cost comes from the electricity used to operate the motor.



EC gold series motors fit both variable and constant torque applications –

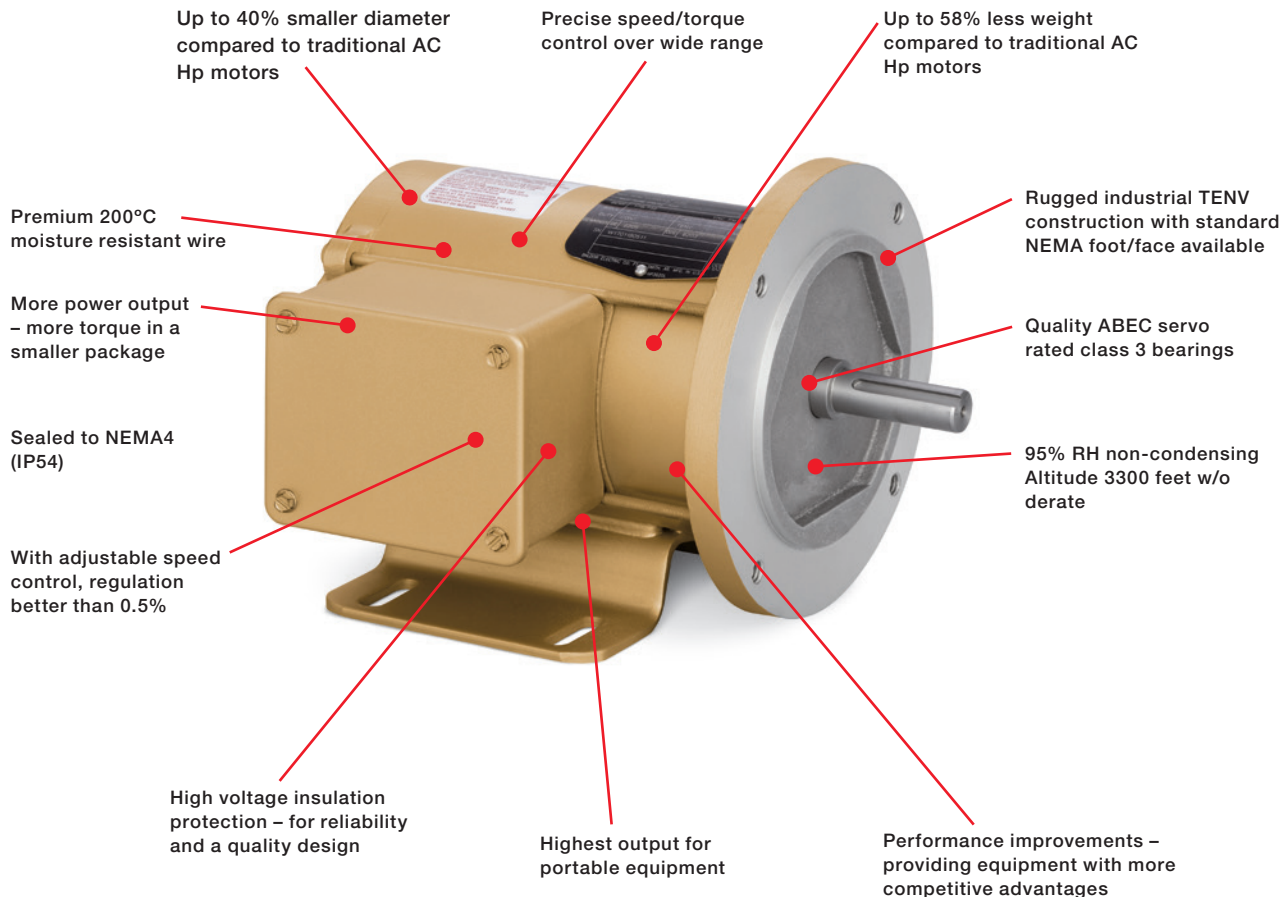
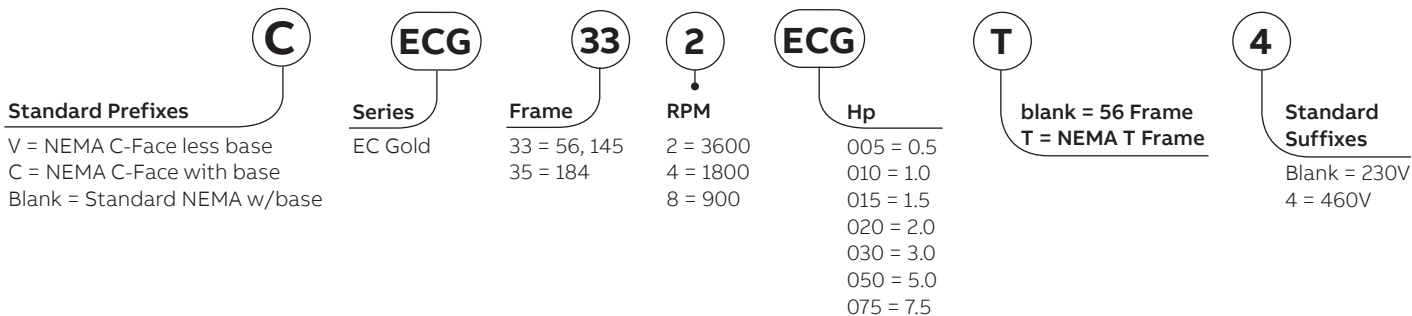
- **Pumps**
- **Fans**
- **Compressors**
- **Conveyors**



EC Gold Series

Product features

Naming Convention



EC Gold Series

Meet or exceed IE4 efficiencies



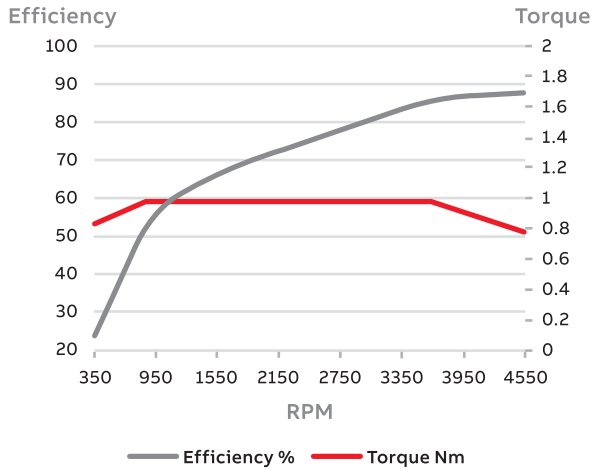
Power Hp	Freq Hz	Speed RPM	NEMA frame	Catalog number		Full load amps		BEMF Vrms		Efficiency %
				230VAC	460VAC	230	460	230	460	
1/2	240	3600	56C	CECG332005	CECG332005-4	1.84	0.92	129.96	259.92	85.25
	120	1800	56C	CECG334005	CECG334005-4	1.43	0.71	167.4	334.8	85.71
	60	900	56C	CECG338005	CECG338005-4	1.56	0.77	156.33	312.66	84.65
1	240	3600	56C	CECG332010	CECG332010-4	2.69	1.34	178.2	356.4	91.32
	120	1800	145TC	CECG334010T	CECG334010T-4	2.66	1.33	179.75	359.5	85.74
	60	900	145TC	CECG338010T	CECG338010T-4	2.71	1.49	176.76	320.4	85.94
1.5	240	3600	56C	CECG332015	CECG332015-4	3.46	1.73	207.72	415.44	92.03
	120	1800	145TC	CECG334015T	CECG334015T-4	3.73	1.86	192.6	385.2	91.27
	60	900	145TC	CECG338015T	CECG338015T-4	5.24	2.62	136.98	273.87	86.79
2	240	3600	56C	CECG332020	CECG332020-4	5.12	2.56	186.91	373.82	90.98
	120	1800	145TC	CECG334020T	CECG334020T-4	5.70	2.85	167.94	335.88	90.4
	60	900	145TC	CECG358020T	CECG358020T-4	6.24	3.12	172.53	345.06	88.6
3	240	3600	145TC	CECG332030T	CECG332030T-4	8.07	4.03	177.84	355.68	89.49
	120	1800	145TC	CECG334030T	CECG334030T-4	7.97	3.98	180.18	360.36	90.26
	60	900	182TC	CECG358030T	CECG358030T-4	8.79	4.4	183.69	367.38	85.71
5	240	3600	184TC	CECG352050T	CECG352050T-4	12.78	6.38	210.6	421.2	91.4
	120	1800	184TC	CECG354050T	CECG354050T-4	15.66	7.83	171.88	343.76	91.3
7.5	240	3600	184TC	CECG352075T	CECG352075T-4	24.98	12.49	161.64	323.28	91.49

For pricing, see the CA501 standard product catalog or the website

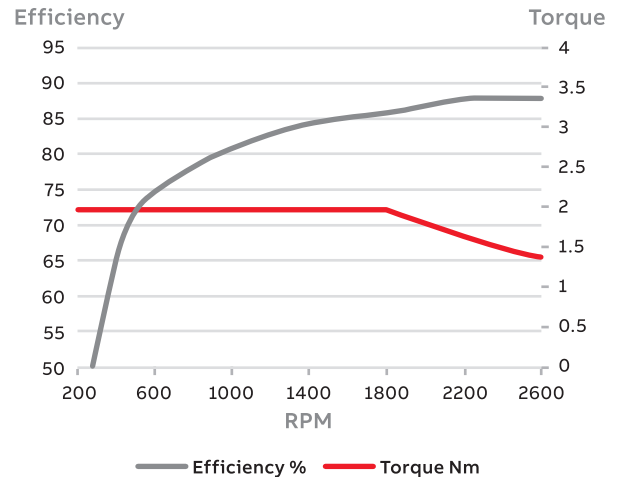
EC Gold Series

0.5 Hp performance curves

1/2 Hp – 3600 RPM



1/2 Hp – 1800 RPM



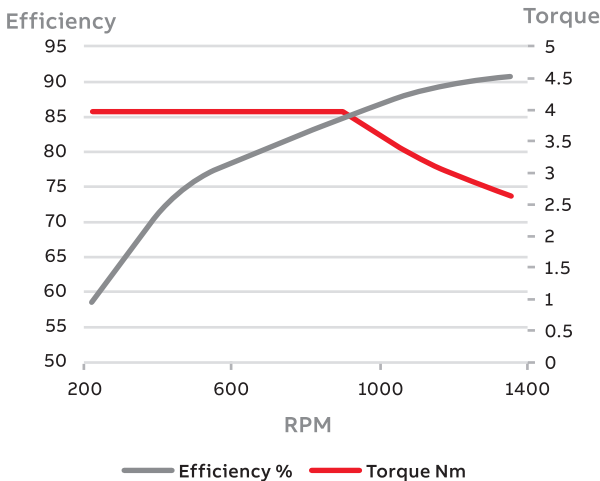
Catalog number		CECG332005	CECG332005-4	CECG334005	CECG334005-4
General					
Rated power	Hp	0.5	0.5	0.5	0.5
Rated torque	lb-in	8.76	8.76	17.51	17.51
	Nm	0.989	0.989	1.979	1.979
Rated current	amps	1.84	0.92	1.43	0.71
Peak torque	lb-in	26.28	26.28	52.53	52.53
	Nm	2.967	2.967	5.937	5.937
Peak current	amps	5.52	2.76	4.29	2.13
Rated speed	rpm	3600	3600	1800	1800
Input volts	VAC	230	460	230	460
Rated frequency	Hz	240	240	120	120
Max speed	rpm	4500	4500	2500	2500
Efficiency	%	85.25	85.25	85.71	85.71
Electrical					
BEMF	Vrms	129.96	259.92	167.4	334.8
Resistance	ohms	6.73	26.91	11.3	45.2
Inductance	mH	15.1	60.4	45.66	182.64
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.00208	0.00208	0.00369	0.00369
	Kg-cm ²	2.35	2.35	4.17	4.17
Frame		56C	56C	56C	56C
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	12/5.4	12/5.4	15/6.8	15/6.8

For pricing, see the CA501 standard product catalog or the website

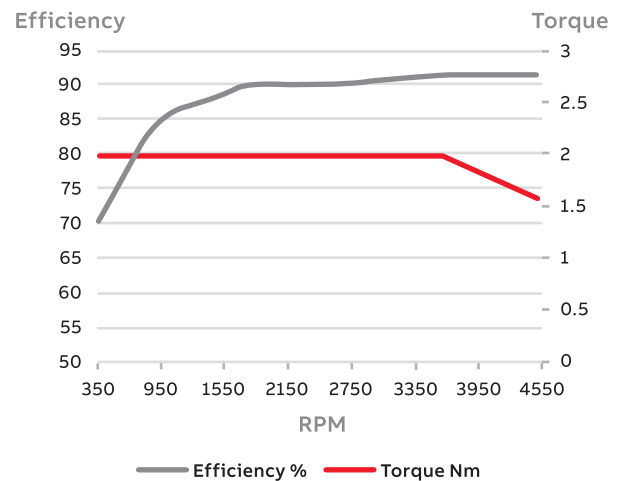
EC Gold Series

0.5 & 1 Hp performance curves

1/2 Hp – 900 RPM



1 Hp – 3600 RPM



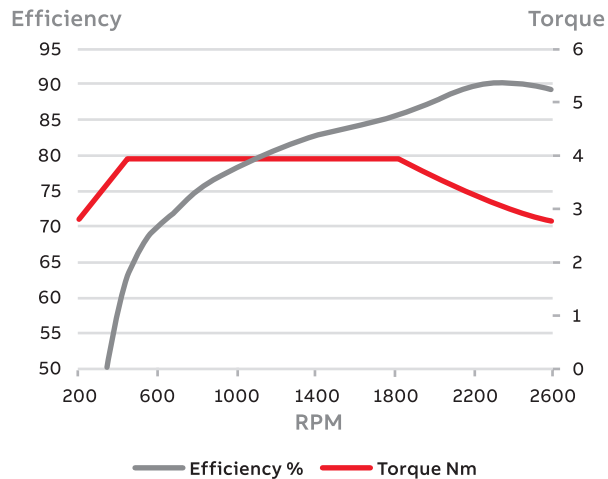
Catalog number		CECG338005	CECG338005-4	CECG332010	CECG332010-4
General					
Rated power	Hp	0.5	0.5	1	1
Rated torque	lb-in	35.03	35.03	17.51	17.51
	Nm	3.958	3.958	1.979	1.979
Rated current	amps	1.56	0.77	2.69	1.34
Peak torque	lb-in	105.09	105.09	52.53	52.53
	Nm	11.874	11.874	5.937	5.937
Peak current	amps	4.68	2.31	8.07	4.02
Rated speed	rpm	900	900	3600	3600
Input volts	VAC	230	460	230	460
Rated frequency	Hz	60	60	240	240
Max speed	rpm	1350	1350	4500	4500
Efficiency	%	84.65	84.65	91.32	91.32
Electrical					
BEMF	Vrms	156.33	312.66	178.2	356.4
Resistance	ohms	16.81	60.16	1.7	6.83
Inductance	mH	7.39	29.56	5.83	23.32
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.00702	0.00702	0.00529	0.00529
	Kg-cm ²	7.93	7.93	5.98	5.98
Frame		56C	56C	56C	56C
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	21/9.5	21/9.5	18/8.2	18/8.2

For pricing, see the CA501 standard product catalog or the website

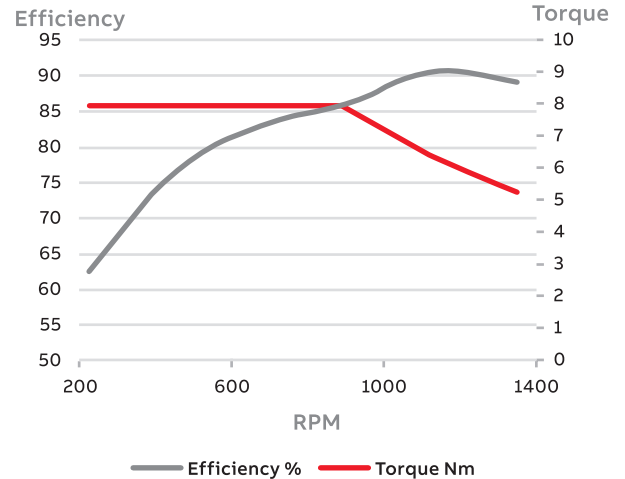
EC Gold Series

1 Hp performance curves

1 Hp – 1800 RPM



1 Hp – 900 RPM



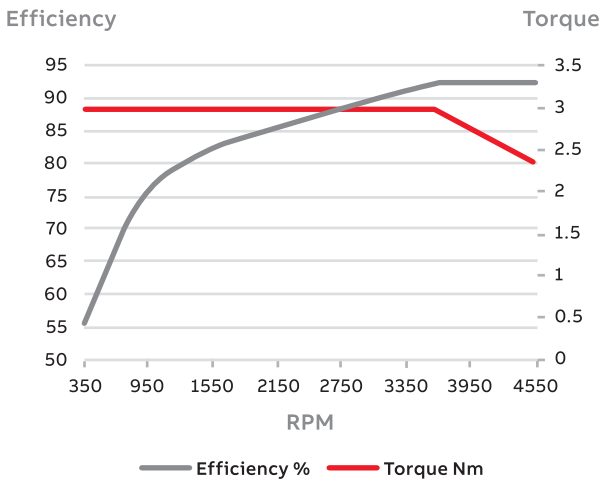
Catalog number		CECG334010T	CECG334010T-4	CECG338010T	CECG338010T-4
General					
Rated power	Hp	1	1	1	1
Rated torque	lb-in	35.03	35.03	70.05	70.05
	Nm	3.958	3.958	7.915	7.915
Rated current	amps	2.66	1.33	2.71	1.49
Peak torque	lb-in	105.09	105.09	210.15	210.15
	Nm	11.874	11.874	23.745	23.745
Peak current	amps	7.98	3.99	8.13	4.47
Rated speed	rpm	1800	1800	900	900
Input volts	VAC	230	460	230	460
Rated frequency	Hz	120	120	60	60
Max speed	rpm	2500	2500	1350	1350
Efficiency	%	85.74	85.74	85.94	85.94
Electrical					
BEMF	Vrms	179.75	359.5	176.76	320.4
Resistance	ohms	8.09	32.35	8.28	30.16
Inductance	mH	35.37	141.48	48.6	194.4
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.00702	0.00702	0.01199	0.01199
	Kg-cm ²	7.93	7.93	13.55	13.55
Frame		145TC	145TC	145TC	145TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	18/8.2	18/8.2	31/14.1	31/14.1

For pricing, see the CA501 standard product catalog or the website

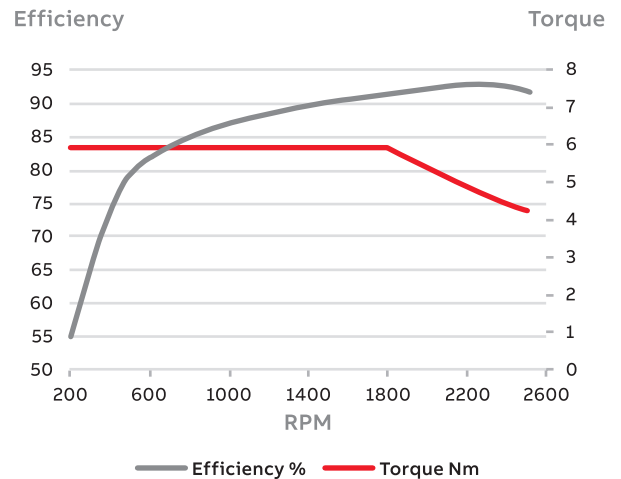
EC Gold Series

1.5 Hp performance curves

1.5 Hp – 3600 RPM



1.5 Hp – 1800 RPM



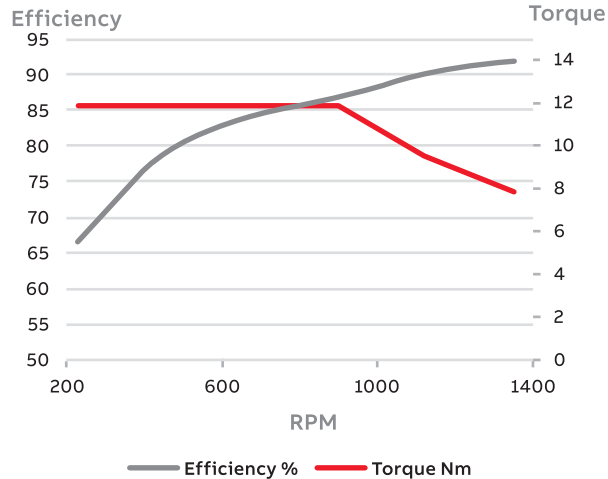
Catalog number		CECG332015	CECG332015-4	CECG334015T	CECG334015T-4
General					
Rated power	Hp	1.5	1.5	1.5	1.5
Rated torque	lb-in	26.27	26.27	52.54	52.54
	Nm	2.968	2.968	5.936	5.936
Rated current	amps	3.46	1.73	3.73	1.86
Peak torque	lb-in	78.81	78.81	157.62	157.62
	Nm	8.904	8.904	17.808	17.808
Peak current	amps	10.38	5.19	11.19	5.58
Rated speed	rpm	3600	3600	1800	1800
Input volts	VAC	230	460	230	460
Rated frequency	Hz	240	240	120	120
Max speed	rpm	4500	4500	2500	2500
Efficiency	%	92	92	91.27	91.27
Electrical					
BEMF	Vrms	207.72	415.44	192.6	385.2
Resistance	ohms	1.67	6.51	3.37	13.48
Inductance	mH	7.25	29	17.2	68.8
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.00702	0.00702	0.01022	0.01022
	Kg-cm ²	7.93	7.93	11.55	11.55
Frame		56C	56C	145TC	145TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	21/9.5	21/9.5	25/11.3	25/11.3

For pricing, see the CA501 standard product catalog or the website

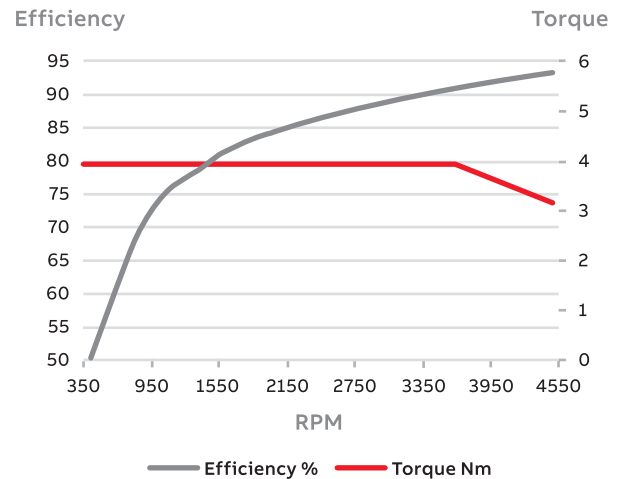
EC Gold Series

1.5 & 2 Hp performance curves

1.5 Hp – 900 RPM



2 Hp – 3600 RPM



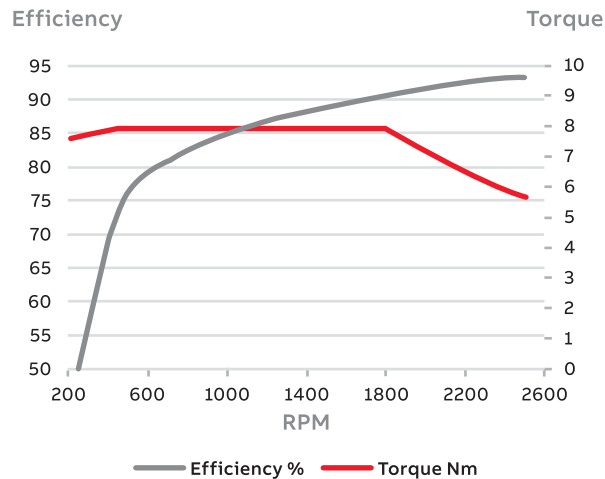
Catalog number		CECG338015T	CECG338015T-4	CECG332020	CECG332020-4
General					
Rated power	Hp	1.5	1.5	2	2
Rated torque	lb-in	105.08	105.08	35.03	35.03
	Nm	11.873	11.873	3.958	3.958
Rated current	amps	5.24	2.62	5.12	2.56
	lb-in	315.24	315.24	105.09	105.09
Peak torque	Nm	35.619	35.619	11.874	11.874
	amps	15.72	7.86	16.08	7.68
Rated speed	rpm	900	900	3600	3600
Input volts	VAC	230	460	230	460
Rated frequency	Hz	60	60	240	240
Max speed	rpm	1350	1350	4500	4500
Efficiency	%	86.79	86.79	90.98	90.98
Electrical					
BEMF	Vrms	136.98	273.87	186.91	373.82
Resistance	ohms	2.86	11.46	1.29	5.16
Inductance	mH	18.6	74.4	5.28	21.12
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.01873	0.01873	0.00727	0.00727
	Kg-cm ²	21.16	21.16	8.22	8.22
Frame		145TC	145TC	56C	56C
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	43/19.5	43/19.5	22/10.0	22/10.0

For pricing, see the CA501 standard product catalog or the website

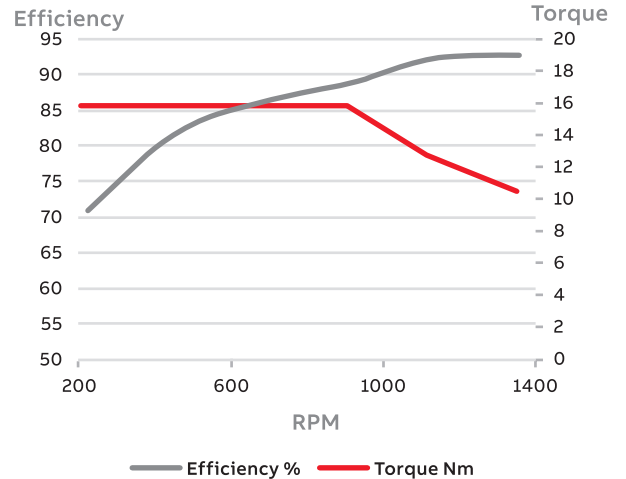
EC Gold Series

2 Hp performance curves

2 Hp – 1800 RPM



2 Hp – 900 RPM



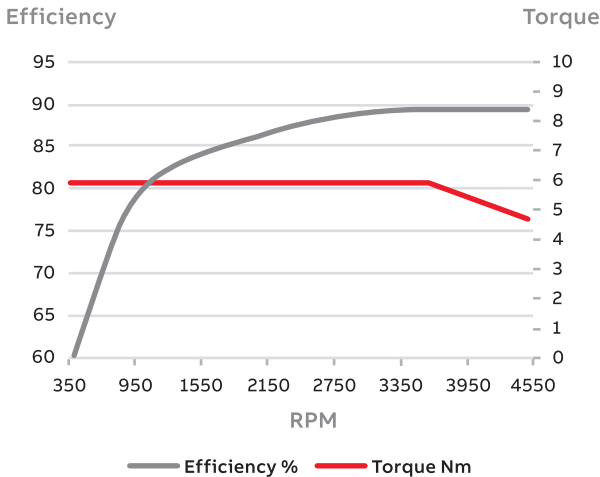
Catalog number		CECG334020T	CECG334020T-4	CECG358020T	CECG358020T-4
General					
Rated power	Hp	2	2	2	2
Rated torque	lb-in	70.05	70.05	140.1	140.1
	Nm	7.915	7.915	15.831	15.831
Rated current	amps	5.7	2.85	6.24	3.12
Peak torque	lb-in	210.15	210.15	420.3	420.3
	Nm	23.745	23.745	47.493	47.493
Peak current	amps	17.1	8.55	18.72	9.36
Rated speed	rpm	1800	1800	900	900
Input volts	VAC	230	460	230	460
Rated frequency	Hz	120	120	60	60
Max speed	rpm	2500	2500	1350	1350
Efficiency	%	90.4	90.4	88.6	88.6
Electrical					
BEMF	Vrms	167.94	335.88	172.53	345.06
Resistance	ohms	2.02	8.08	2.29	9.16
Inductance	mH	11.9	47.6	30.83	123.32
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.01199	0.01199	0.11395	0.11395
	Kg-cm ²	13.55	13.55	128.76	128.76
Frame		145TC	145TC	145TC	145TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	31/14.1	31/14.1	88/39.9	88/39.9

For pricing, see the CA501 standard product catalog or the website

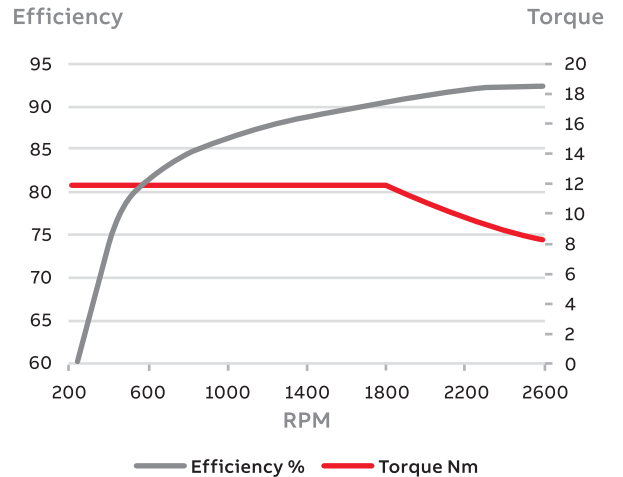
EC Gold Series

3 Hp performance curves

3 Hp – 3600 RPM



3 Hp – 1800 RPM



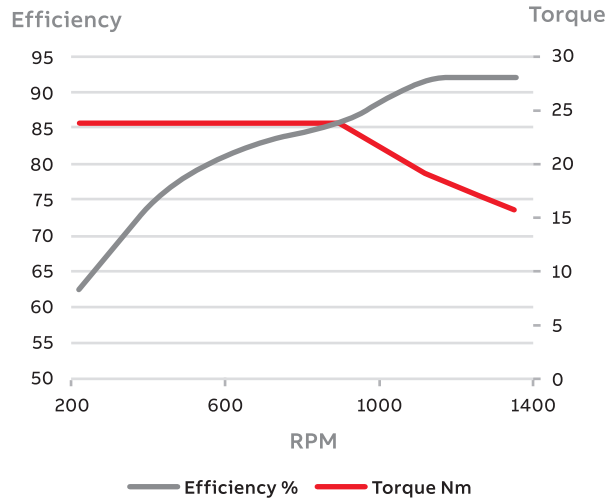
Catalog number		CECG332030T	CECG332030T-4	CECG334030T	CECG334030T-4
General					
Rated power	Hp	3	3	3	3
Rated torque	lb-in	52.54	52.54	105.08	105.08
	Nm	5.936	5.936	11.873	11.873
Rated current	amps	8.07	4.03	7.97	3.98
Peak torque	lb-in	157.62	157.62	315.24	315.24
	Nm	17.808	17.808	35.619	35.619
Peak current	amps	24.21	12.09	23.91	11.94
Rated speed	rpm	3600	3600	1800	1800
Input volts	VAC	230	460	230	460
Rated frequency	Hz	240	240	120	120
Max speed	rpm	4500	4500	2500	2500
Efficiency	%	89.49	89.49	90.26	90.26
Electrical					
BEMF	Vrms	177.84	355.68	180.18	360.36
Resistance	ohms	0.67	2.68	1.18	4.74
Inductance	mH	3.24	12.96	8.28	33.13
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celsius	155	155	155	155
Ambient temperature	Celsius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.01022	0.01022	0.01814	0.01814
	Kg-cm ²	11.55	11.55	20.5	20.5
Frame		145TC	145TC	145TC	145TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	27/12.2	27/12.2	40/18.1	40/18.1

For pricing, see the CA501 standard product catalog or the website

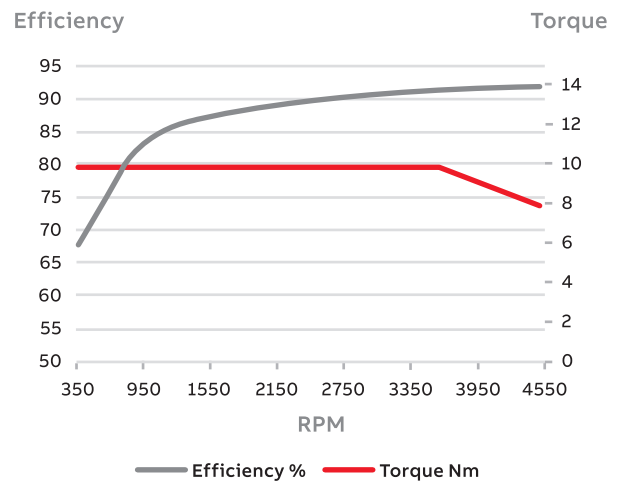
EC Gold Series

3 & 5 Hp performance curves

3 Hp – 900 RPM



5 Hp – 3600 RPM



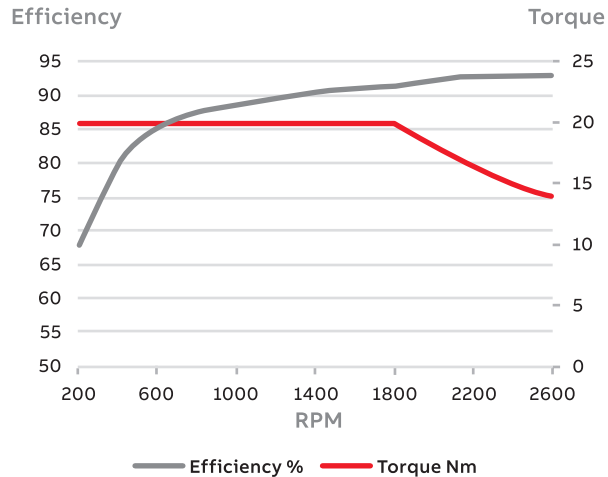
Catalog number		CECG358030T	CECG358030T-4	CECG352050T	CECG352050T-4
General					
Rated power	Hp	3	3	5	5
Rated torque	lb-in	210.15	210.15	87.56	87.56
	Nm	23.746	23.746	9.894	9.894
Rated current	amps	8.79	4.4	12.78	6.38
Peak torque	lb-in	630.45	630.45	262.68	262.68
	Nm	71.238	71.238	29.682	29.682
Peak current	amps	26.37	13.2	38.34	19.13
Rated speed	rpm	900	900	3600	3600
Input volts	VAC	230	460	230	460
Rated frequency	Hz	60	60	240	240
Max speed	rpm	1350	1350	4500	4500
Efficiency	%	85.71	85.71	91.43	91.43
Electrical					
BEMF	Vrms	183.69	367.38	210.6	421.2
Resistance	ohms	2.3	9.2	0.276	1.1
Inductance	mH	26	104	3.75	15
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.14252	0.14252	0.08556	0.08556
	Kg-cm ²	161.05	161.05	96.68	96.68
Frame		182TC	182TC	184TC	184TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	98/44.5	98/44.5	72/32.7	72/32.7

For pricing, see the CA501 standard product catalog or the website

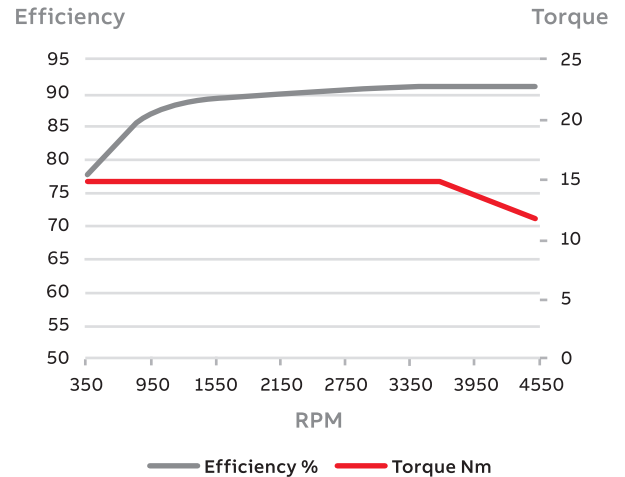
EC Gold Series

5 & 7.5 Hp performance curves

5 Hp – 1800 RPM



7.5 Hp – 3600 RPM

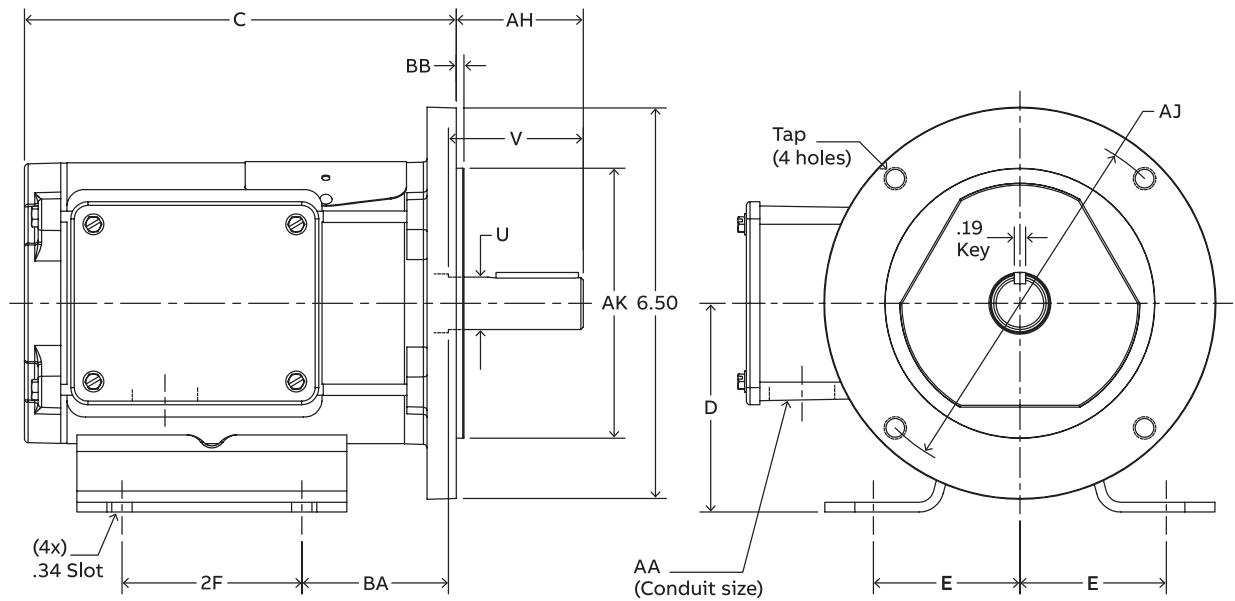


Catalog number		CECG354050T	CECG354050T-4	CECG352075T	CECG352075T-4
General					
Rated power	HP	5	5	7.5	7.5
Rated torque	lb-in	175.13	175.13	131.34	131.34
	Nm	19.788	19.788	14.841	14.841
Rated current	amps	15.66	7.83	24.98	12.49
	lb-in	525.39	525.39	394.02	394.02
Peak torque	Nm	59.364	59.364	44.523	44.523
	amps	46.98	23.49	74.94	37.35
Rated speed	rpm	1800	1800	3600	3600
Input volts	VAC	230	460	230	460
Rated frequency	Hz	120	120	240	240
Max speed	rpm	2500	2500	4500	4500
Efficiency	%	91.33	91.33	91.49	91.49
Electrical					
BEMF	Vrms	171.88	343.76	161.64	323.28
Resistance	ohms	0.449	1.79	0.119	0.47
Inductance	mH	4.79	19.16	1.15	4.6
Number of motor poles		8	8	8	8
Insulation	Class	F	F	F	F
Max winding temperature	Celcius	155	155	155	155
Ambient temperature	Celcius	-25 to 40	-25 to 40	-25 to 40	-25 to 40
Mechanical					
Inertia	lb-in-s ²	0.14252	0.14252	0.11404	0.11404
	Kg-cm ²	161.05	161.05	128.87	128.87
Frame		184TC	184TC	184TC	184TC
Enclosure		TENV	TENV	TENV	TENV
Weight	lbs/Kg	98/44.5	98/44.5	88/39.9	88/39.9

For pricing, see the CA501 standard product catalog or the website

EC Gold Series

NEMA mountings



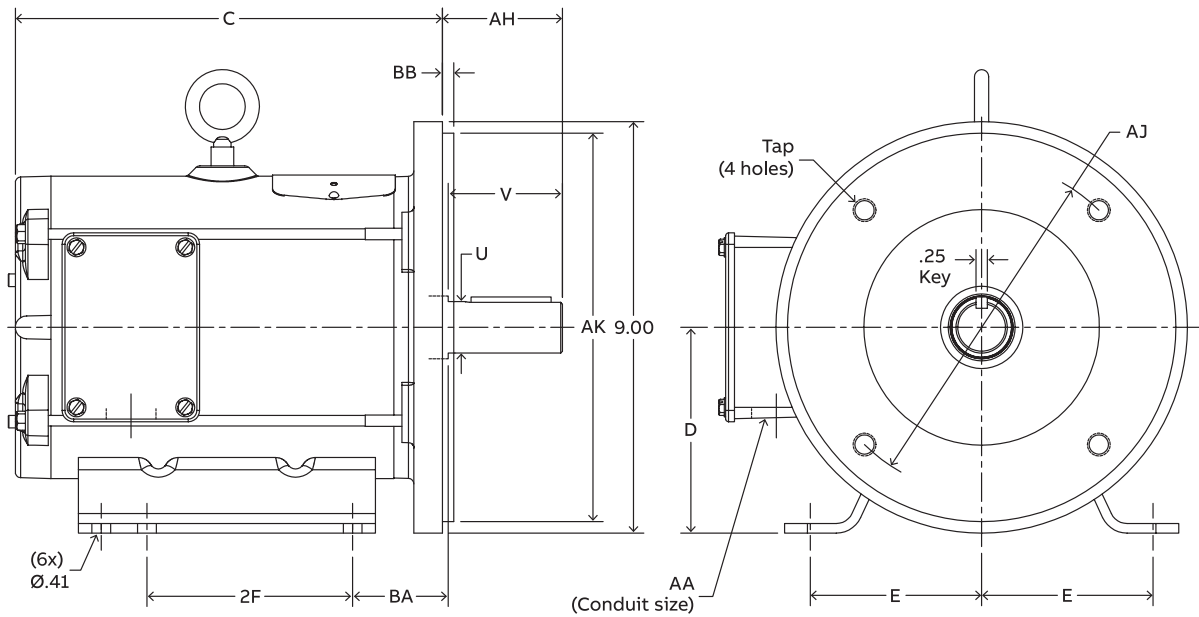
Dimensions in inches

NEMA frame	D	E	2F	U	V	AA	AH	AJ	AK	BA	BB	Tap
56C	3.50	2.44	3.00	.625	1.88	1/2"	2.06	5.88	4.50	2.75	.13	3/8 - 16
145TC	3.50	2.44	3.00	.875	2.25	3/4"	2.13	5.88	4.50	2.44	.13	3/8 - 16



EC Gold Series

NEMA mountings



Dimensions in inches

NEMA frame	D	E	2F	U	V	AA	AH	AJ	AK	BA	BB	Tap
182TC	4.50	3.88	4.50	1.125	2.50	3/4"	2.63	7.25	8.50	2.09	.25	1/2 - 13
184TC	4.50	3.88	5.50	1.125	2.50	3/4"	2.63	7.25	8.50	2.09	.25	1/2 - 13

EC Gold Series

Dimensions

Dimensions in inches

Hp	RPM	Catalog number		NEMA frame	“C” length	Weight (lb)
		230VAC	460VAC			
1/2	3600	CECG332005	CECG332005-4	56C	7.19	12
	1800	CECG334005	CECG334005-4	56C	7.19	15
	900	CECG338005	CECG338005-4	56C	9.44	21
1	3600	CECG332010	CECG332010-4	56C	7.19	18
	1800	CECG334010T	CECG334010T-4	145TC	7.19	18
	900	CECG338010T	CECG338010T-4	145TC	12.44	31
1.5	3600	CECG332015	CECG332015-4	56C	9.44	21
	1800	CECG334015T	CECG334015T-4	145TC	9.44	25
	900	CECG338015T	CECG338015T-4	145TC	13.94	43
2	3600	CECG332020	CECG332020-4	56C	9.44	22
	1800	CECG334020T	CECG334020T-4	145TC	12.44	31
	900	CECG358020T	CECG358020T-4	145TC	13.34	88
3	3600	CECG332030T	CECG332030T-4	145TC	9.44	27
	1800	CECG334030T	CECG334030T-4	145TC	12.44	40
	900	CECG358030T	CECG358030T-4	182TC	15.34	98
5	3600	CECG352050T	CECG352050T-4	184TC	11.34	72
	1800	CECG354050T	CECG354050T-4	184TC	15.34	98
7.5	3600	CECG352075T	CECG352075T-4	184TC	13.34	88

EC Gold Series

Drive setup/commissioning instructions

Setup/commissioning instructions when using the CECG-Series motor with an ABB ACS355 drive

Only 7 parameters required! (Drive setup/commissioning can be complete in just a few minutes)

MOTOR TYPE is **PMSM** and MOTOR CTRL MODE is **VECT SPD**

The 5 remaining parameter values can be found on the motor nameplate.

See the nameplate below for parameter data location

Actual values will vary depending on the motor selection

Drive should now be ready for the ID Run

Motor nameplate

NAMEPLATE	
NP3620L	
CAT. NO.	CECG334010T
SPEC.	33-3249T033
HP	1.000 RPM 1800
FRAME	145TC SER. F. 1.00
AC VOLTS	230
MOT NOM CURRENT	2.66
MOT NOM FREQ	120
BEMF	179.748
CLASS	F AMB 40
DUTY	CONT ENCL TENV
DE	6205 ODE 6203
SN	

Parameter ACS355

9903	MOTOR TYPE PMSM
9904	MOTOR CTRL MODE VECT SPD
9905	MOT NOM VOLTAGE (Vrms)
9906	MOT NOM CURRENT (Amps)
9907	MOT NOM FREQ (Hz)
9908	MOT NOM SPEED (RPM)
9909	MOT NOM POWER (Hp)





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