

全密型單相鐵板馬達 (TEFC)  
(For NEMA)

**MODEL : BEGS19/BEGS39**

ROLLED STEEL FRAME  
SINGLE PHASE HVAC MOTORS  
LOW VOLTAGE SQUIRREL CAGE  
FRAME SIZE : 48~215T



DWG NO.

**31057D72308**

REV. 00

		<b>SPECIFICATION TABLE</b>	MODEL <b>BEGS19/BEGS39</b>
		ROLLED STEEL FRAME SINGLE PHASE HVAC MOTORS	
ITEM		STANDARD SPECIFICATION	
R A T I N G	Kind of Motors	Squirrel Cage Induction Motors ( SCIM ) , CSCR ( Capacitor Start Capacitor Run )	
	Design Standards	NEMA MG-1, MG-13.	
	Voltages	Rated Voltage 115/208 - 230V. 3HP~10HP 208 - 230V.	
	Frequency	60 Hz.	
	Output Range	1/4 HP ~ 10HP	
	R.P.M. (Syn.)	3600 RPM, 1800 RPM ( 2P, 4P ).	
	Time Duty	S.F. 1.15 for 60Hz 115 & 230V ( SF1.0 for 60Hz 208V ).	
	Frame Size	48 ~ 215T	
	Protection Enclosure	Totally Enclosed ( IP44 ).	
	Mounting	Horizontal Foot Mounted, with or without C-flange ( IM 1001, IM 2101 ) F1.	
A P P L I C A T I O N	Power Condition	Voltage : $\pm 10\%$ , Frequency : $\pm 5\%$ , and 10% Max. of Combined Voltage and Frequency, But Frequency Variation does not Exceed $\pm 5\%$ .	
	Designed Primarily	HVAC, Fan, Compressor and Pumps	
	Environment Conditions	Place : Non - Hazardous. Ambient Temperature : $-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$ . Relative Humidity : Less Than 90%RH ( Non - Condensation ). Altitude : Less Than 3,300ft.	
	Drive Method	Belt Service, or Direct Coupling Service.	
	Direction of Rotation	Bi - Directional.	
	Method of Starting	Full Voltage Direct On Line.	
P E R F O R M A N C E	Temperature Rise	B Rise, Not to Exceed $90^{\circ}\text{C}$ . for S.F. 1.15 or $80^{\circ}\text{C}$ for S.F. 1.0 by Resistance Method. F Rise, Not to Exceed $115^{\circ}\text{C}$ . for S.F. 1.15 or $105^{\circ}\text{C}$ for S.F. 1.0 by Resistance Method, for F180T, F210T.	
	Over Speed	125% Syn. R.P.M. for 2 Minutes. ( 2,4 Poles)	
	Over Torque	160% Rated Torque for 15 Sec.	

		<b>PERFORMANCE DATA</b>										MODEL					
		SINGLE-PHASE INDUCTION MOTORS LOW VOLTAGE SQUIRREL CAGE										<b>BEGS19</b>					
TEFC, CLASS F, 40°C AMBIENT TEMP. CONTINUOUS DUTY S.F. 1.15, 230V 60HZ																	
<b>TYPICAL PERFORMANCE</b>																<b>( 230 V )</b>	
OUTPUT		FULL LOAD rpm	FRAME NO.	FULL LOAD				LOCKED ROTOR			BREAK DOWN TORQUE	STARTING CAPACITOR		RUNNING CAPACITOR		ROTOR	
HP	kw			TORQUE lb-ft	Eff. (%)	P.F. (%)	CURRENT (A)	TORQUE %FLT	KVA CODE	CURRENT (A)	%FLT	MFD	VAC	MFD	VAC	Wk <sup>2</sup> lb-ft <sup>2</sup>	
3	2.2	3480	182T	4.450	80.0	96.0	12.5	410	H	90	220	300	330	30	450	0.164	
		1740	182T	8.900	82.5	92.0	12.6	350	H	88	240	250	330	40	450	0.356	
5	3.7	3490	184T	7.460	82.0	98.0	20.0	350	H	140	200	400	330	50	450	0.202	
		1740	184T	14.97	84.0	94.0	20.4	320	G	131	220	350	330	60	450	0.475	
7.5	5.5	3510	213T	11.03	84.5	98.0	28.9	420	H	220	220	600	350	80	450	0.451	
		1750	213T	22.13	82.0	94.0	31.1	400	H	218	240	800	350	80	450	0.902	
10	7.5	3520	215T	15.00	86.0	98.0	38.7	390	H	310	240	900	350	100	450	0.617	
		1750	215T	30.18	83.5	94.0	41.6	350	H	304	220	1000	350	100	450	1.092	

NOTE : 1. The above are typical values based on test according to ANSI/IEEE standard 114 method B.  
2. Breakdown & Locked rotor torques are show as average expected values.  
3. Efficiency, power factor, speed and torque are the same for other voltages.  
Current values vary inversely with voltage.  
4. Tolerance according to IEC 60034-1.  
5. Data subject to change without notice.

		<b>PERFORMANCE DATA</b>										MODEL					
		SINGLE-PHASE INDUCTION MOTORS LOW VOLTAGE SQUIRREL CAGE										<b>BEGS39</b>					
TEFC, CLASS F, 40°C AMBIENT TEMP. CONTINUOUS DUTY S.F. 1.15, 115 / 230V 60HZ																	
<b>TYPICAL PERFORMANCE</b> ( 230 V )																	
OUTPUT		FULL LOAD rpm	FRAME NO. (1)	FRAME NO. (2)	FULL LOAD				LOCKED ROTOR			BREAK DOWN TORQUE %FLT	STARTING CAPACITOR		RUNNING CAPACITOR		ROTOR Wk <sup>2</sup> lb-ft <sup>2</sup>
HP	kW				TORQUE lb-ft	Eff. (%)	P.F. (%)	CURRENT (A)	TORQUE %FLT	KVA CODE	CURRENT (A)		MFD	VAC	MFD	VAC	
1/4	0.18	3500	48	56	0.360	68.0	90.0	1.28	310	L	11	220	200	125	20	250	0.007
		1735	48	56	0.720	70.0	83.0	1.35	260	K	8.8	230	150	125	25	250	0.024
1/3	0.25	3500	48	56	0.500	72.0	90.0	1.68	310	L	14	230	250	125	25	250	0.007
		1735	48	56	1.010	74.0	83.0	1.77	310	K	12	260	200	125	30	250	0.026
1/2	0.37	3510	48	56	0.740	74.0	90.0	2.42	330	L	21	260	300	125	35	250	0.009
		1730	48	56	1.490	77.0	85.0	2.46	330	J	16	240	250	125	40	250	0.036
3/4	0.55	3510	48	56	1.100	77.0	92.0	3.38	330	K	28	260	350	125	40	250	0.010
		1730	48	56	2.240	78.5	87.0	3.50	270	H	22	230	300	125	60	250	0.045
1	0.75	3500	56H	143T	1.500	78.5	92.0	4.51	330	H	30	240	400	165	60	250	0.036
		1740	56H	143T	3.010	80.0	90.0	4.53	280	H	28	240	300	165	60	250	0.108
1.5	1.1	3500	56H	143T	2.210	81.5	96.0	6.11	320	H	46	260	500	165	80	250	0.045
		1740	56H	145T	4.450	81.5	92.0	6.38	250	H	40	230	400	165	80	250	0.142
2	1.5	3500	56H	145T	3.010	82.5	96.0	8.23	310	G	53	250	550	165	100	250	0.052
		1735	56H	145T	6.070	82.5	92.0	8.59	240	G	52	220	500	165	100	250	0.164
3	2.2	3510	56H	145T	4.410	84.0	98.0	11.7	310	J	98	270	250	300	40	450	0.069

NOTE : 1. The above are typical values based on test according to ANSI/IEEE standard 114 method B.  
2. Breakdown & Locked rotor torques are show as average expected values.  
3. Efficiency, power factor, speed and torque are the same for other voltages.  
Current values vary inversely with voltage.  
4. 3 HP Rated Voltage 230V only.  
5. Tolerance according to IEC 60034-1.  
6. Data subject to change without notice.

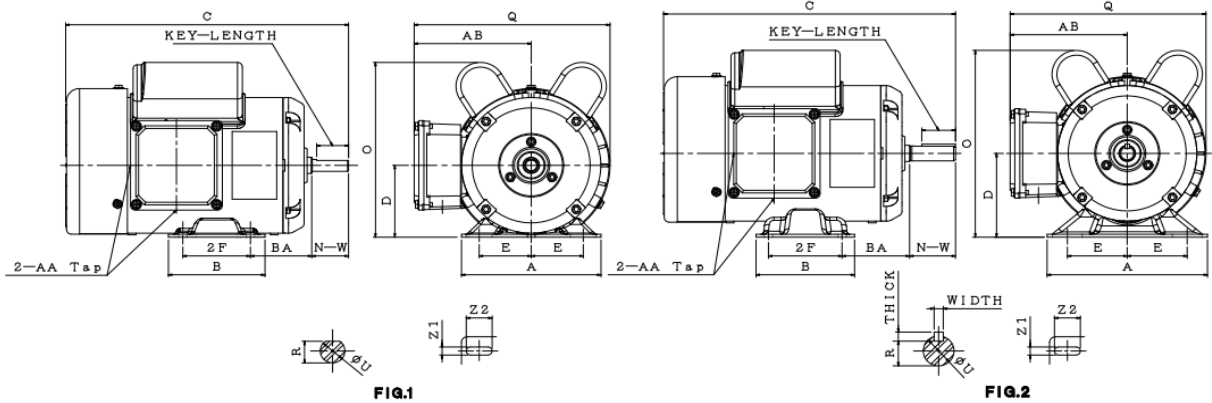
# OUTLINE DIMENSIONS SHEET

MODEL

BEGS39

ROLLED STEEL FRAME  
SINGLE-PHASE INDUCTION MOTORS  
FRAME SIZE 48/56 ( 2,4P 3/4HP and Below )

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



Dimension in inches

Output (HP)			FRAME SIZE	FIG. NO.	Mounting			A	B	C	D	O	Q	Z1	Z2
2P	4P	6P			E	2F	BA								
1/4	1/4	—	48	1	2.12	2.75	2.50	5.69	3.94	11.00	3.00	7.30	7.98	0.34	1.05
1/3	1/3	—								11.60					
1/2	1/2	—								12.20					
3/4	3/4	—													
1/4	1/4	—	56	2	2.44	3.00	2.75	6.54	4.02	11.30	3.50	7.80			1.22
1/3	1/3	—								11.90					
1/2	1/2	—								12.50					
3/4	3/4	—													

FRAME SIZE	Key			Keyseat R	Terminal Housing		Shaft Extension		Bearings		APPROX. WEIGHT LBS		
	WIDTH	THICK	LENGTH		AA	AB	N-W	U	DRIVE END	OPPOSITE DRIVE END	2P	4P	6P
48	—	—	1.3	0.453	NPT 1/2"	4.77	1.500	0.5	6203ZZ	6202ZZ	20.7	21.4	—
											21.6	22.3	—
											25.1	26.5	—
											28.7	29.5	—
56	0.188	0.188	1.41	0.517			0.625				20.9	21.6	—
											21.8	22.5	—
											25.4	26.7	—
											28.9	29.8	—

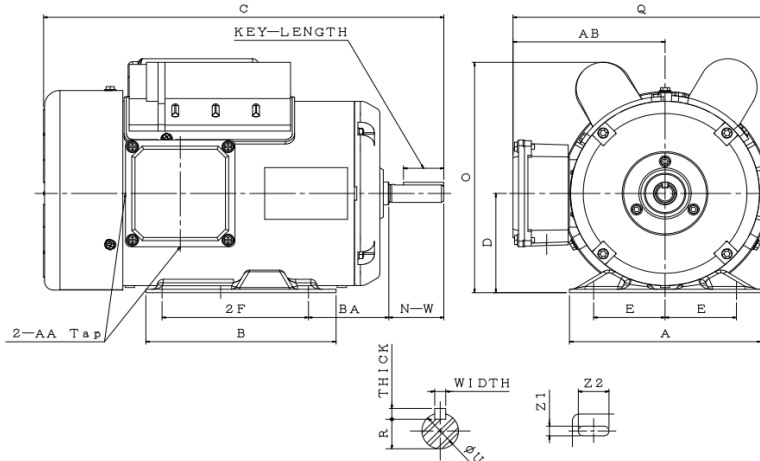
Note : 1. Dimension D tolerance : +0.00 inch , -0.06 inch .  
 2. Dimension U tolerance : +0.000 inch , -0.0005 inch .  
 3. Dimension R tolerance : +0.000 inch , -0.015 inch .

# OUTLINE DIMENSIONS SHEET

MODEL  
**BEGS39**

ROLLED STEEL FRAME  
SINGLE-PHASE INDUCTION MOTORS  
FRAME SIZE 56H/140T ( 2,4P Above 1HP and Below 3HP)

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



**FIG.3**

Dimension in inches

Output (HP)			FRAME SIZE	FIG. NO.	Mounting			A	B	C	D	O	Q	Z1	Z2
2P	4P	6P			E	2F	BA								
1	1	—	56H	3	2.44	5.00	2.75	6.54	6.50	12.90	3.50	8.22	8.76	0.34	1.22
1.5	1.5	—								13.70					
2	—	—								14.50					
3	2	—	14.50		2.25	5.91	14.10	14.90	0.5						
1	1	—	143T							2.75	4.00	13.30			
1.5	—	—	145T										5.00	14.10	
2	1.5	—	145T	5.00	14.10	14.90									
3	2	—	145T				5.00	14.10	14.90						

FRAME SIZE	Key			Keyseat R	Terminal Housing		Shaft Extension		Bearings		APPROX. WEIGHT LBS		
	WIDTH	THICK	LENGTH		AA	AB	N-W	U	DRIVE END	OPPOSITE DRIVE END	2P	4P	6P
56H	0.188	0.188	1.41	0.517	NPT 1/2"	5.20	1.875	0.625	6204ZZ	6203ZZ	35.5	39.0	—
											40.3	45.2	—
											43.4	—	—
											53.6	51.4	—
140T	0.188	0.188	1.41	0.771	NPT 1/2"	5.20	2.250	0.875	6205ZZ	6203ZZ	35.9	39.5	—
											40.8	45.6	—
											43.9	—	—
											54.0	51.8	—

- Note :
1. Dimension D tolerance : +0.00 inch , -0.06 inch .
  2. Dimension U tolerance : +0.000 inch , -0.0005 inch .
  3. Dimension R tolerance : +0.000 inch , -0.015 inch .

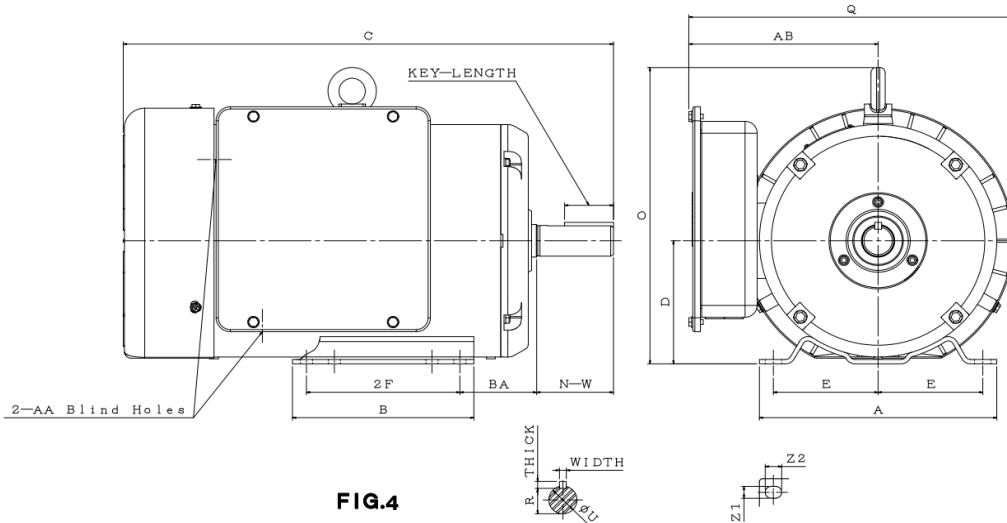
# OUTLINE DIMENSIONS SHEET

MODEL

**BEGS19**

ROLLED STEEL FRAME  
SINGLE-PHASE INDUCTION MOTORS  
FRAME SIZE 180T/210T (2,4P Above 3HP and Below 10HP)

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



Dimension in inches

Output (HP)			FRAME SIZE	FIG. NO.	Mounting			A	B	C	D	O	Q	Z1	Z2
2P	4P	6P			E	2F	BA								
3	3	—	182T	4	3.75	2.75	8.51	6.50	16.20	4.50	10.84	11.63	0.43	0.59	
5	5	—	184T		5.50				17.60						
7.5	7.5	—	213T		5.50	3.5	10.44	8.47	19.90	5.25	12.36	13.6			
10	10	—	215T		7.00				21.30						

FRAME SIZE	Key			Keyseat R	Terminal Housing		Shaft Extension		Bearings		APPROX. WEIGHT LBS		
	WIDTH	THICK	LENGTH		AA	AB	N-W	U	DRIVE END	OPPOSITE DRIVE END	2P	4P	6P
180T	0.25	0.25	1.78	0.99	AA	6.78	2.75	1.125	6206ZZ	6205ZZ	82.9	88.4	—
											102	106	—
210T	0.312	0.312	2.41	1.20	φ1.1	7.92	3.375	1.375	6208ZZ	6206ZZ	149	176	—
											183	202	—

- Note :
1. Dimension D tolerance : +0.00 inch , -0.06 inch .
  2. Dimension U tolerance : +0.000 inch , -0.0005 inch .
  3. Dimension R tolerance : +0.000 inch , -0.015 inch .