marathon®

Explosion Proof Motors

Model No: 284TTGN16550
Catalog No: E547-P

Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 1800 RPM, 284T Frame, EPFC

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Product Information Packet: Model No: 284TTGN16550, Catalog No: E547-P Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 1800 RPM, 284T Frame, EPFC

Nameplate Specifications

Phase	**3**	Output HP	**25 & 20 Hp**
Output KW	**18.7 & 14.9 kW**	Voltage	**230/460 & 190/380 V**
Speed	**1772 & 1472 r/min**	Synchronous RPM	**1800 & 1500 r/min**
Service Factor	**1.15 & 1.15**	Frame	**284T**
Enclosure	**Explosion Proof Fan cooled**	Thermal Protection	**Thermostat**
Efficiency	**93.6 & 93 %**	Ambient Temperature	**40 °C**
Frequency	**60 & 50 Hz**	Current	**62/31 & 60/30 A**
Power Factor	**81**	Duty	**Continuous**
Insulation Class	**F**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6311**
Opp Drive End Bearing Size	**6210**	UL	**UL Listed And CSA Certified**
CSA	**Y**	CE	**N**
IP Code	**54**	Number of Speeds	**1**
Hazardous Location	**DIV 1 EXP PROOF CL I GR CD CL II GR FG T3B**		

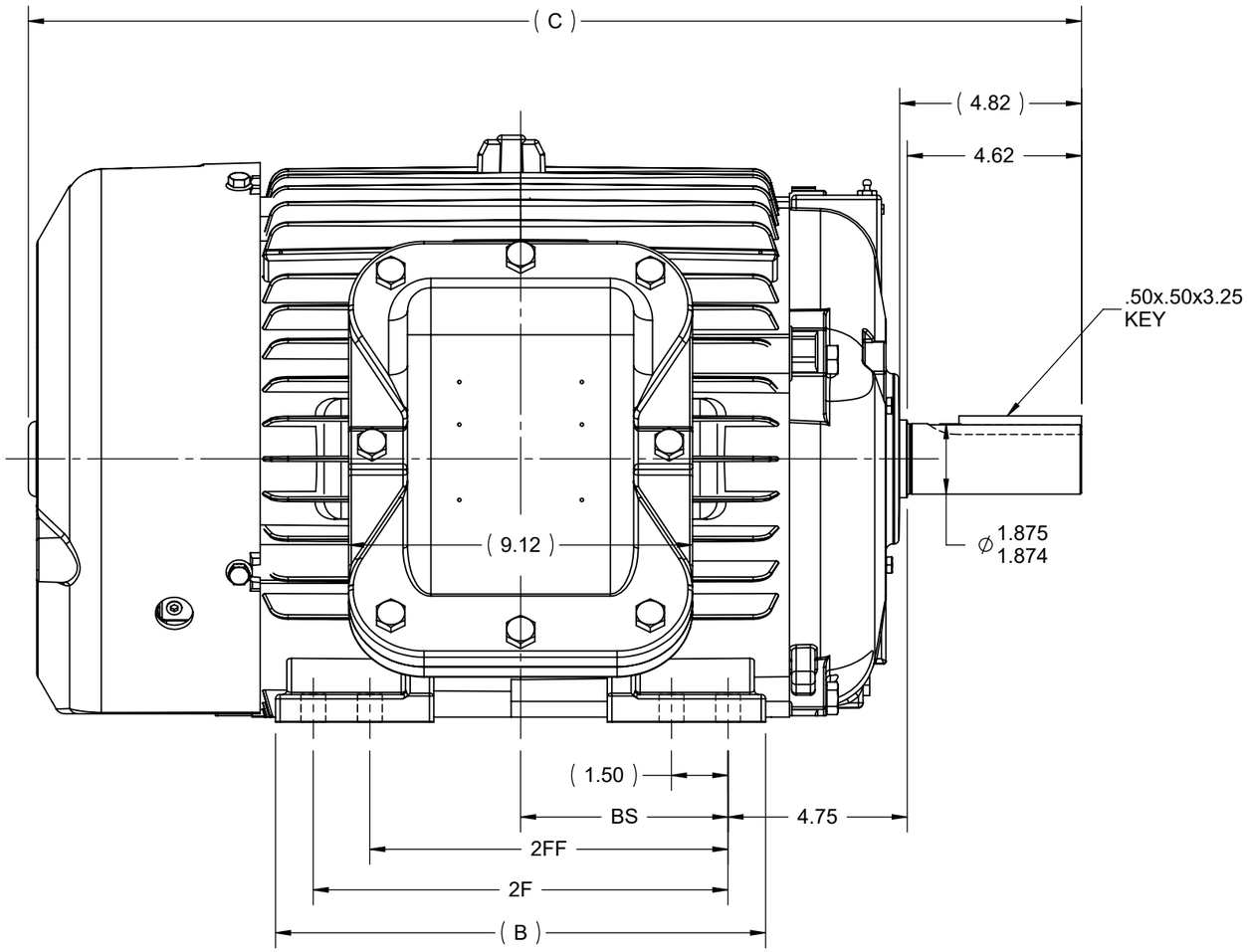
Technical Specifications

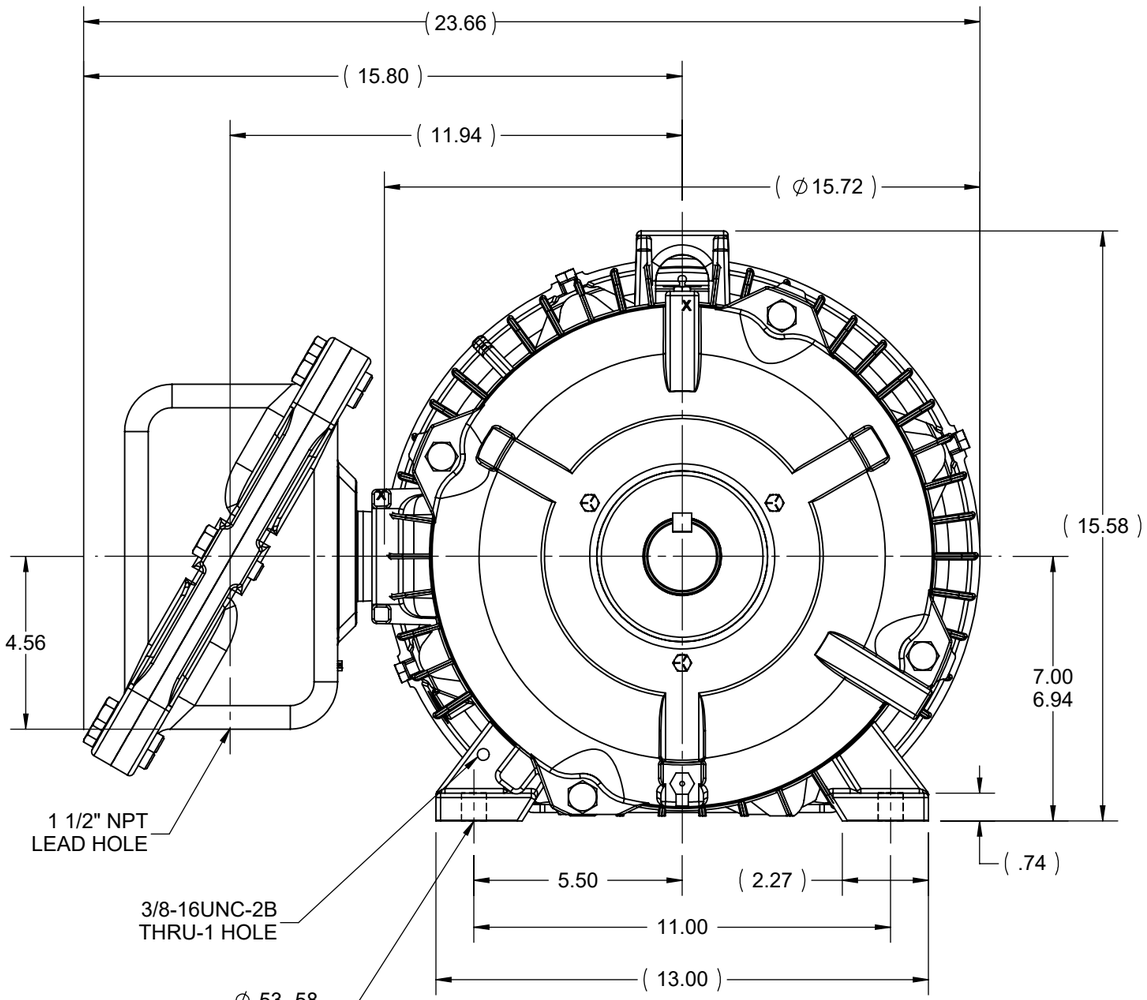
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.271 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Overall Length	**26.21 in**
Frame Length	**12.75 in**	Shaft Diameter	**1 7/8 in**
Shaft Extension	**4.82 in**	Assembly/Box Mounting	**F1 Only**
Inverter Load	**Constant 10:1**		

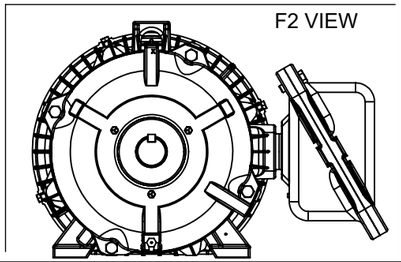
Drawings

Connection Drawing	**A-EE7308T**	Outline Drawing	**B-SS311106-1275**

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NOTES:
1. CONDUIT BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.
2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°. THIS MODIFICATION CAN BE PERFORMED ONLY BY THE ORIGINAL EQUIPMENT MANUFACTURER OR BY A FACILITY THAT IS COVERED UNDER UNDERWRITERS LABORATORIES INC. CATEGORY PTKQ, TITLED "MOTORS AND GENERATORS, REBUILT FOR USE IN HAZARDOUS LOCATIONS".
3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	BS	2F	2FF	
1275	284T	12.50	26.43	4.75	9.50	---	
1425	284/6T	13.00	27.93	5.50	11.00	9.50	

DRAWING REVISION	REVISION BY	REV DATE/© DATE
D	SB	07/24/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023556	SBD	07/24/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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TOLERANCES (EXCEPT AS NOTED):

DEC.	INCH	mm	ANGLE
.X	±0.1	[±3]	±7' 30"
.XX	±0.03	[±0.8]	
.XXX	±0.005	[±0.13]	
.XXXX	±0.0005	[±0.013]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°
CORNER FILLETS: R.02 [.5]
MACHINED SURFACES: 200 / 5.1 INCH / mm
mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

DRAWN BY	HLB
DATE	10/10/2002
APPROVED BY	DD
DATE	10/10/2002
REFERENCE	
THIRD ANGLE PROJECTION	

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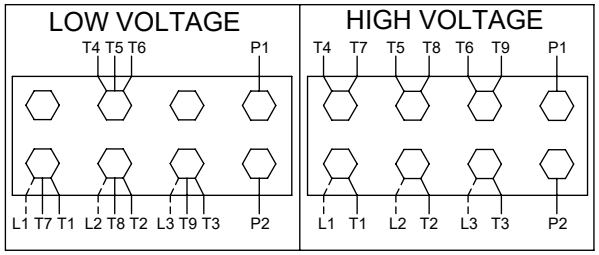
DESCRIPTION
OUTLINE
280T FR. - BB - STD - 12.50 LAM

MATERIAL | PROCESS/FINISH

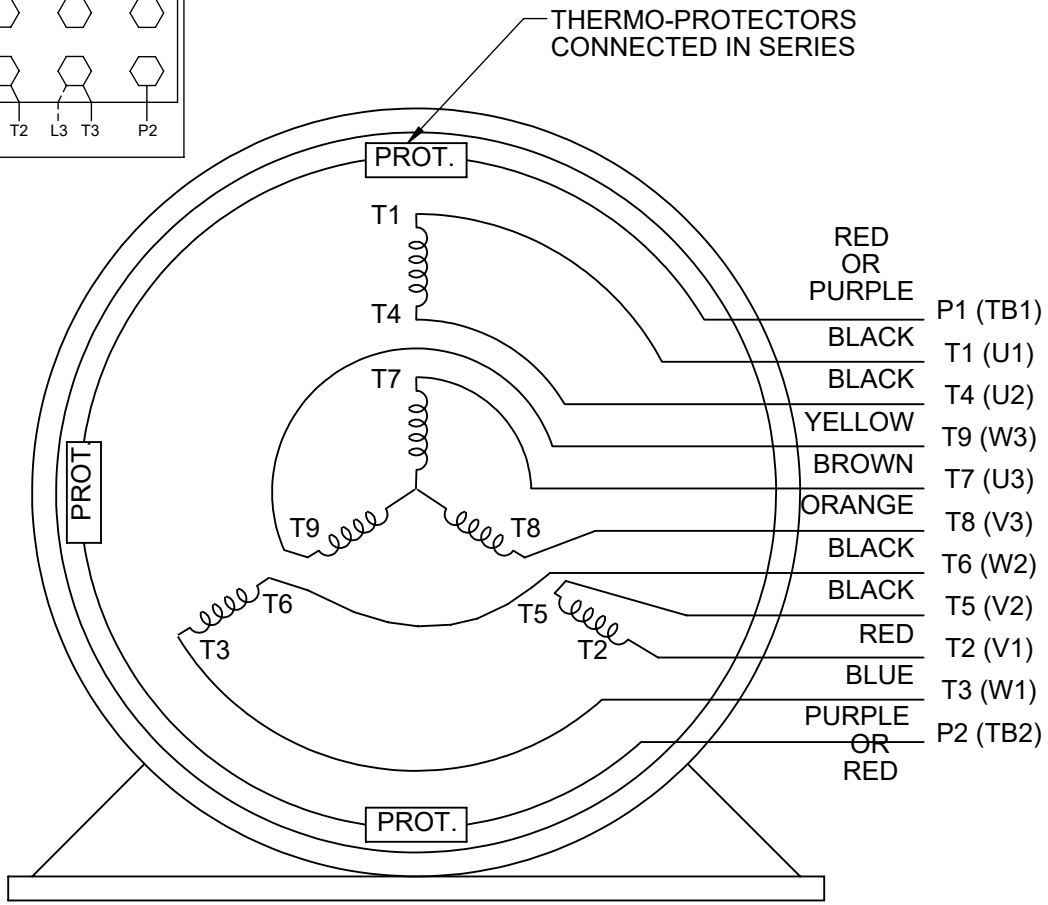
SIZE B | DRAWING NUMBER SS311106 | SHEET 1 OF 1

HIGH VOLTAGE

(U1) T1 — L1
(V1) T2 — L2
(W1) T3 — L3
(U2) T4
(U3) T7
(V2) T5
(V3) T8
(W2) T6
(W3) T9



THREE PHASE
DUAL VOLTAGE MOTOR



VIEW OF TERMINAL END

NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE

(U1) T1 — L1
(U3) T7 — L1
(V1) T2 — L2
(V3) T8 — L2
(W1) T3 — L3
(W3) T9 — L3
(U2) T4
(V2) T5
(W2) T6

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR IMG PLANT

DRAWING REVISION: U	REVISION BY: SB	REV DATE/© DATE: 08/01/2025	PRIMARY DIMENSIONS ARE INCH mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY	DRAWN BY: SMC	marathon™
REQUEST NUMBER: CR-0023654	APPROVED BY: SBD	DATE: 08/01/2025		DATE: 05-13-1992	
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED				APPROVED BY: TB	DESCRIPTION: CONN DIAGRAM-EXTERNAL
				DATE: 05-13-1992	3 PHASE - DUAL VOLTAGE MOTOR
				REFERENCE: EE7308/EE7300	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE: A — DRAWING NUMBER: EE7308T — SHEET: 1 OF 1

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Data Sheet

Date: 1/25/2019
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® Motors

284TTGN16550

Submittal

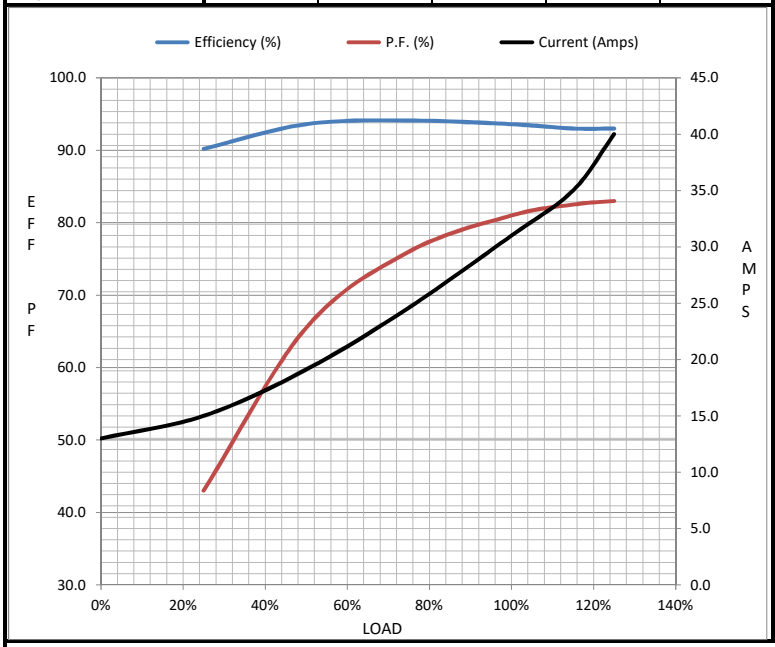
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	13.0	15.0	19.1	24.6	31.0	35.0	40.0	182	
Torque (ft-lb)	0.00	18.3	37.0	55.5	74.0	85.5	93.0	138	
RPM	1800	1793	1787	1780	1772	1,767	1763	0	
Efficiency (%)		90.2	93.6	94.1	93.6	93.0	93.0		
P.F. (%)	3.0	43.0	65.5	76.0	81.0	82.5	83.0	33.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1662	1772	1800
Current (Amps)	182	169	108	31.0	13.0
Torque (ft-lb)	138	117	185	74.0	0.00

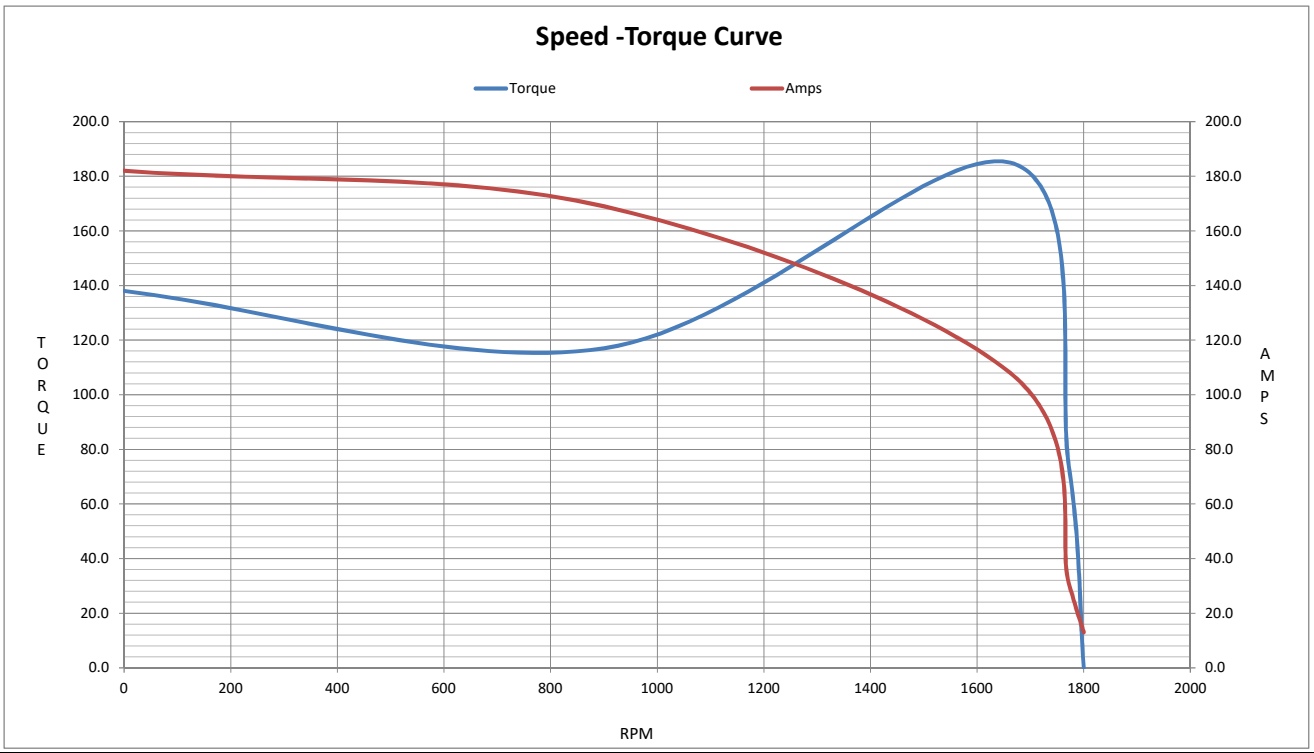


Information Block

HP	25.0
Sync. RPM	1800
Frame	284
Enclosure	EPFC
Construction	TGS
Voltage	230/460#190/380 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	60 ° C
Duty	CONT
Ambient	40 ° C
Elevation	3,300 feet
Rotor/Shaft wk²	4.2 Lb-Ft²
Ref Wdg	K2844161 NONE
Sound Pressure @ 1M	65 dBA
VFD Rating	CONSTANT 10:1
Outline Dwg	B-SS311106-1275
Conn. Diag	A-EE7308T
Additional Specifications:	
0	
0	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.1810	0.1570	0.8480	1.0850	19.7750



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CERTIFICATION DATA SHEET

Model#:	284TTGN16550 AA	**WINDING#:**	K2844161 NONE 9
CONN. DIAGRAM:	A-EE7308T	**ASSEMBLY:**	F1 ONLY
OUTLINE:	B-SS311106-1275		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
25&20	18.7&14.9	1800	1772&1472	284T	EPFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#190/380	62/31&60/30	LINE OR INVERTER	CONTINUOUS	F3	1.15/1.15	40	3300

FULL LOAD EFF: 93.6&93	3/4 LOAD EFF: 94.1	1/2 LOAD EFF: 93.6	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 81&81	3/4 LOAD PF: 76	1/2 LOAD PF: 65.5	93	SQ CAGE INV RATED	26 / 13

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
74 LB-FT	364 / 182	138 LB-FT 186	185 LB-FT 250	60

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
65 dBA	75 dBA	4.2 LB-FT^2	175 LB-FT^2	50 SEC.	2	475 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	EXP PROOF CL I GR C&D CL II GR F&G T3B	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6311	BALL 6210	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED

ENCODER: NONE
NONE NONE
NONE NONE PPR

BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

* NOTES *

DATE: 06/27/2017 01:32:05 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.