

PRODUCT INFORMATION PACKET

Model No: 254TPFSA10088

Catalog No: SY010

SyMAX® Fan & Blower Motor, 15 HP, 3 Ph, 120 Hz, 460 V, 1800 RPM, 254TC Frame, TEFC



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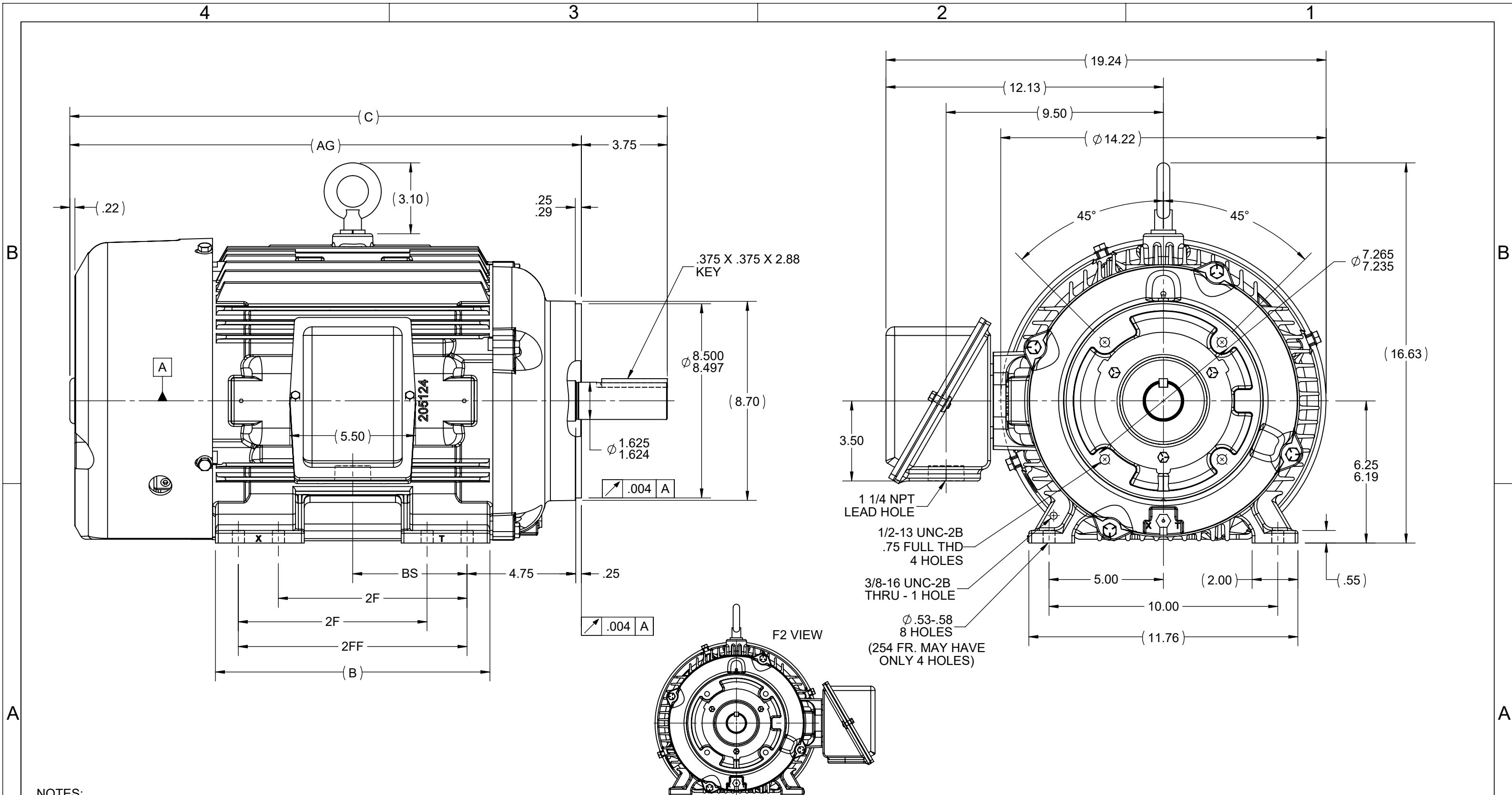
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Nameplate Specifications

Phase	3	Output HP	15 Hp
Output KW	11.2 kW	Voltage	460 V
Speed	1800 rpm	Service Factor	1
Frame	254TC	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostat	Efficiency	94 %
Ambient Temperature	40 °C	Frequency	120 Hz
Current	18.0 A	Power Factor	80
Duty	Continuous	Insulation Class	H
Design Code	No Design Code	KVA Code	N/A
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6210
UL	Recognized	CSA	Y
CE	N	IP Code	54
Number of Speeds	1		

Technical Specifications

Electrical Type	AC Permanent Magnet	Starting Method	Inverter Only
Poles	8	Rotation	Reversible
Resistance Main	0 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	25.68 in
Frame Length	12.25 in	Shaft Diameter	1.625 in
Shaft Extension	3.75 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 20:1		
Connection Drawing	EE7300T	Outline Drawing	SS203152-1225



- NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
(NOT FIELD MODIFIABLE ON PMAC MOTORS)
 3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DRAWING REVISION J	REVISION BY VS	REV DATE/© DATE 23rd Jan 23
REQUEST NUMBER NMR-0219676	APPROVED BY VS	DATE 23rd Jan 23
REQUEST NUMBER DESCRIPTION FAN GUARD POSITION CORRECTED C & AG 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 PKG	DATE 09-03-1996
APPROVED BY BW	DATE 09-06-1996
REFERENCE	
THIRD ANGLE PROJECTION	

		Regal Beloit America, Inc.	
		DESCRIPTION	
DATE		OUTLINE	
APPROVED BY		250TC FR - TEFC - BB - TS - C'FACE - TFNA - CAST C'BOX	
REFERENCE		MATERIAL	PROCESS/FINISH
SIZE	DRAWING NUMBER	SHEET	
B	SS203152	1 OF 1	

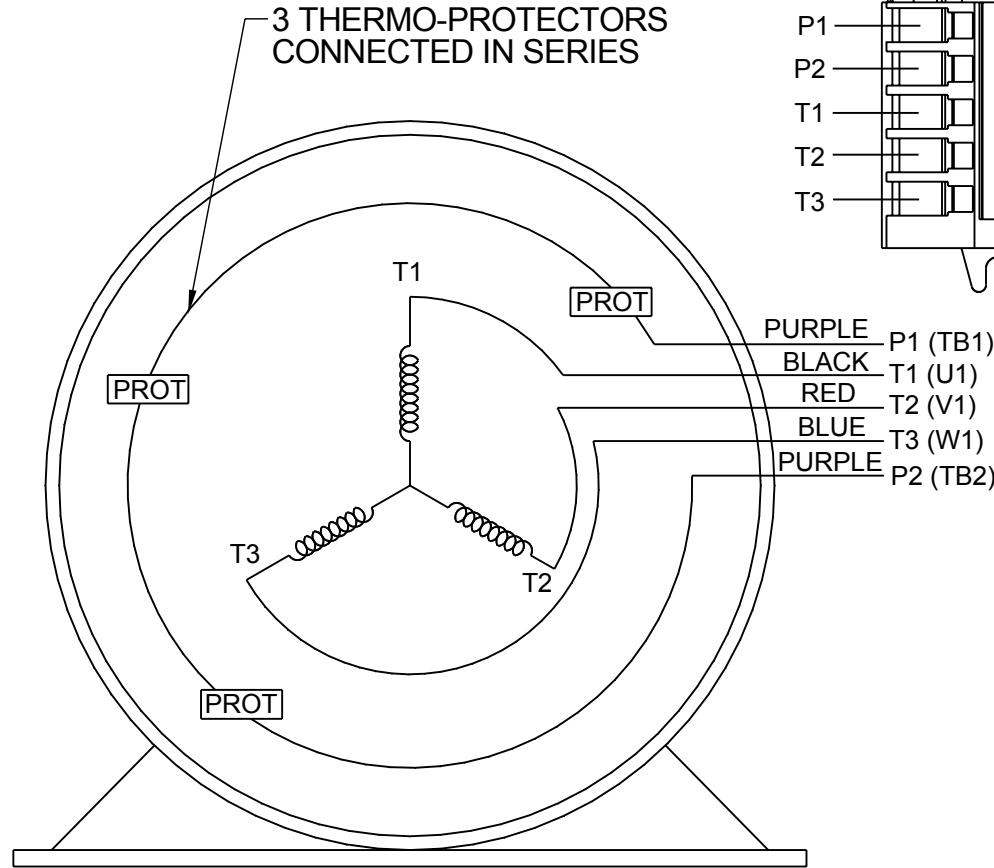
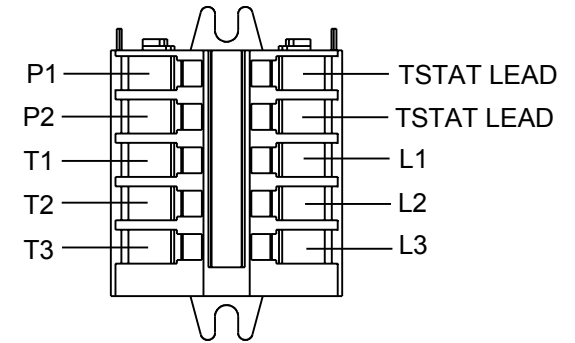
DASH	FRAME	B	C	AG	2F	2FF	BS
1050	254TC	10.25	24.37	20.61	8.25	-----	4.12
1225	254/256TC	12.00	26.12	22.36	8.25	10.00	5.00

**THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'**

**TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS**

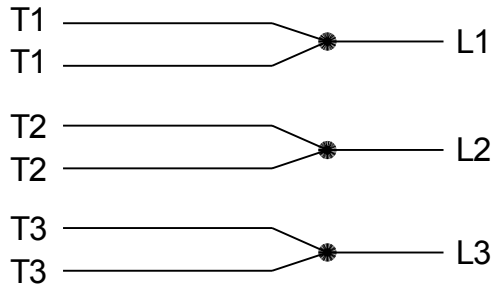
**NOTE FOR FACTORY USE ONLY:
TO SURGE TEST:
FOR 3 LEAD COMMON CONNECT:
CONNECT P1 TO T1 THEN P2 TO L1
FOR 6 LEAD COMMON CONNECT:
CONNECT P1 TO BOTH T1
THEN P2 TO L1**

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

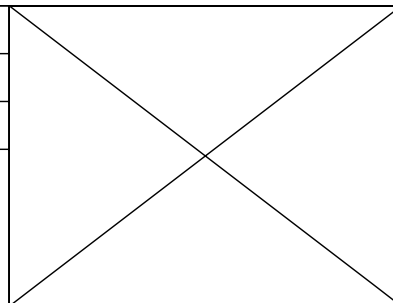
**IF MOTOR HAS MULTIPLE
T'S PER LEAD CONNECT
TOGETHER LIKE T'S**



A-9806 DECAL

- T2BM
- T6AW
- T6AL
- T6Z
- T4EG
- T4BF
- T8A
- T6H
- T6A
- T4AX
- T4A
- T2A
- T2F

DRAWING REVISION AB	REVISION BY AJW	DATE 07-17-2015
ECO ECO-0081632	APPROVED BY T.VUE	DATE 07-17-2015
ECO DESCRIPTION REV'D IEC MARKINGS PER IEC-60034-8		
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DRAWN BY LZ	Regal Beloit America, Inc.	
DATE 01-04-1994		
APPROVED BY GK	DESCRIPTION CONN DIAGRAM-EXTERNAL 3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR	
DATE 01-20-1994	MATERIAL	
REFERENCE	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER EE7300T
		SHEET 1 OF 1

CERTIFICATION DATA SHEET

Model#: 254TPFSA10088 A
CONN. DIAGRAM: A-EE7300
OUTLINE: B-SS203152-1225

WINDING#: PM25608009 R1 1
ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
15	11.2	1800	1800	254TC	TEFC	NO KVA CODE	PM

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	120	460	18	INVERTER ONLY	CONTINUOUS	H1	1.0	40	3300

FULL LOAD EFF: 94	3/4 LOAD EFF: -	1/2 LOAD EFF: -	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 80	3/4 LOAD PF: -	1/2 LOAD PF: -	94	AC PERMANENT MAGNET	1.5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
43.77 LB-FT	-	- LB-FT -	- LB-FT -	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	1.96 LB-FT^2	0 LB-FT^2	0 SEC.	0	286 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0	0.073	2.27	3.65	111

RM	ZREF	XR	TD	TD0
0	1	0	0	0

***** SUPPLEMENTAL INFORMATION *****

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLACK (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6309	6210						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS 140(N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 20:1 INV. HP SPEED RANGE: 1.2 X BASE SPEED
ENCODER: NONE NONE NONE NONE NONE PPR
BRAKE: NONE NONE

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N
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S
*

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

DATE: 06/23/2017 01:57:46 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet



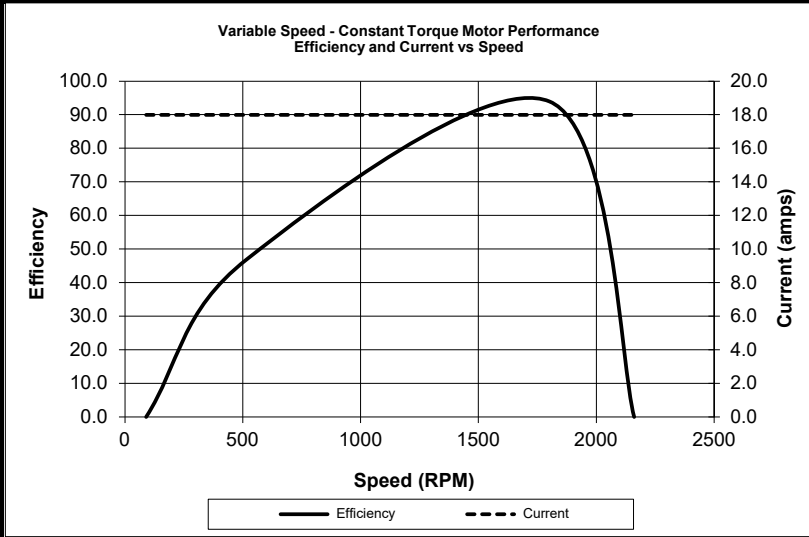
Date: 8/3/2022
 Customer: _____
 Attention: _____
 Submitted by: SHERYL KUEHMICHEL

Model: 254TPFSA10088
 Catalog: SY010
 Winding: PM25608009
 Submittal Data @ 460 V

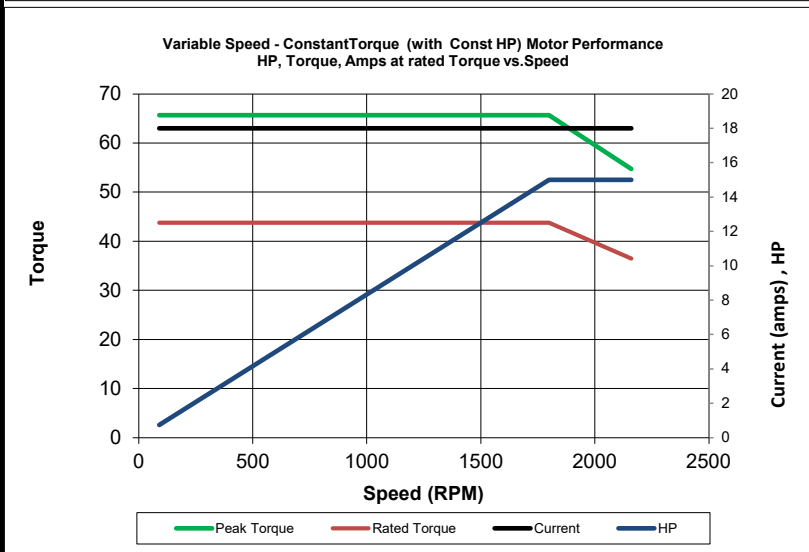
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	150%
Current (Amps)	2	4.7	8.9	13.1	18	20.9	22.9	30.4
Torque (ft-lb)	0.0	10.9	21.9	32.8	43.8	50.3	54.7	65.6
Efficiency (%)		91.0	93.5	94.1	94.0	93.6	93.5	92.5

Motor Speed Data



Motor Characteristics			
HP	15.00		
Sync. RPM	1800		
Frame	256		
Enclosure	TEFC		
Construction Type	TFN		
Voltage	460 V		
Frequency	120 Hz		
Motor P.F. (%)	80.0		
Reserve Tq Capability	150 %		
Temp Rise @ FL	60 °C		
Insulation Class	H		
Duty	CONT		
Ambient	40 °C		
Elevation	3,300 feet		
Ref Wdg	PM25608009 R1		
Sound Pressure @ 1m	65 dBA		
Motor Wgt	286 Lb		
Rotor/Shaft wk ²	1.96 Lb-Ft ²		
CT Speed Range	20 :1		
VT Speed Range	2000 :1		
Outline Dwg			
Conn. Diag			
DE Bearing			
ODE Bearing			
Additional Specifications:			
PWM variable frequency electronic drive that is			
permanent magnet motor capable required for operation.			
Motor efficiency reflects operation on a VFD			
R / phase (ohms)	Ld (mH)	Lq (mH)	BEMF (V/krpm)
0.293	9.08	14.6	222



Constant Torque (Constant Power) Load Points

Hz	RPM	HP	ft-lb	Amps	Eff	Pk Tq
6	90	0.75	43.8	18	0	65.70
120	1800	15.0	43.8	18	94	65.70
144	2160	15.0	36.5	18	0	54.75