

# PRODUCT INFORMATION PACKET

Model No: 184TPNSB10236

Catalog No: SY007A

SyMAX® Fan & Blower Motor, 5 HP, 3 Ph, 90 Hz, 230/460 V, 1800 RPM, 184TC Frame, TENV



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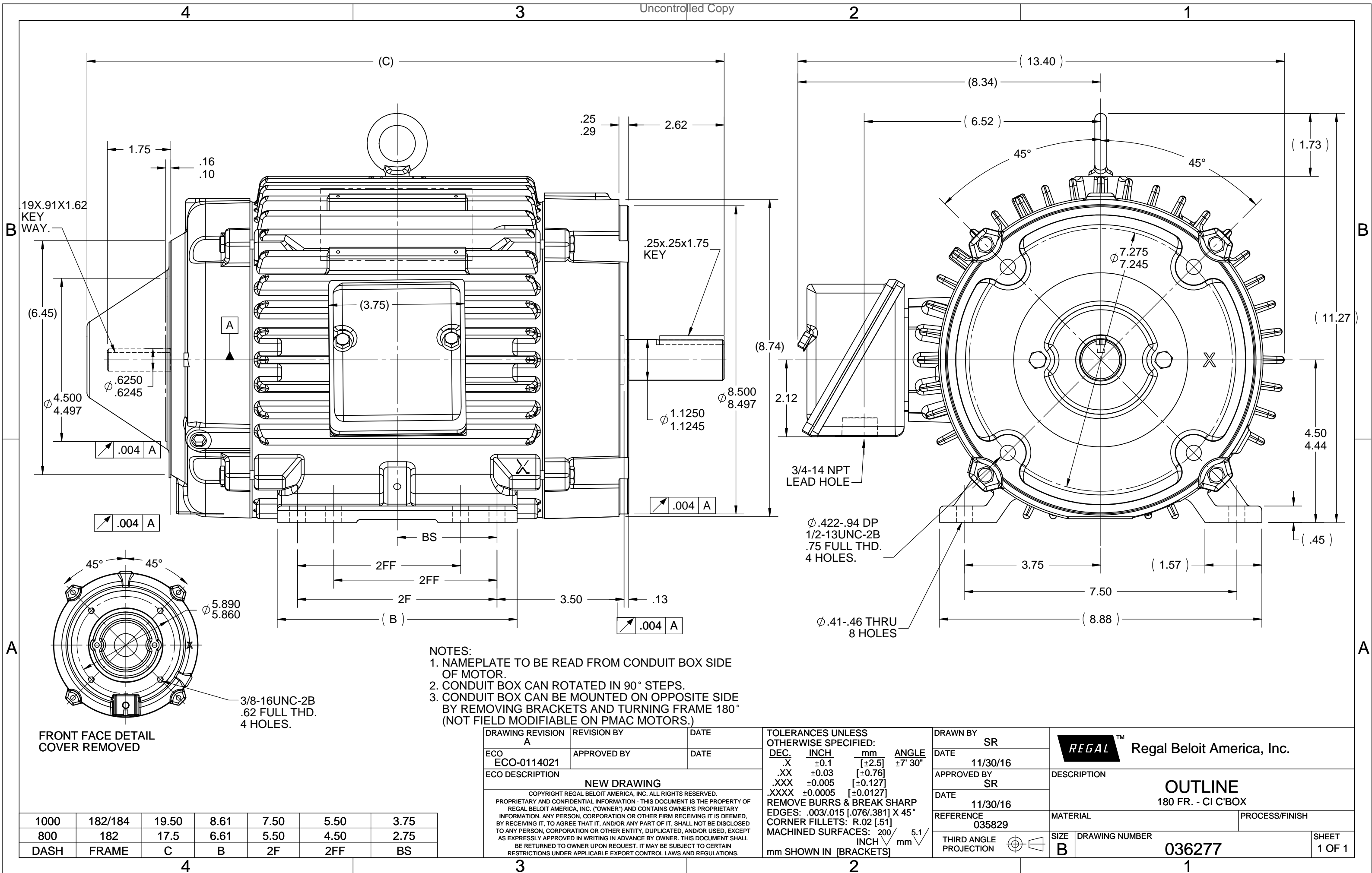
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>5 Hp</b>
Output KW	<b>3.7 kW</b>	Voltage	<b>230/460 V</b>
Speed	<b>1800 rpm</b>	Service Factor	<b>1</b>
Frame	<b>184TC</b>	Enclosure	<b>Totally Enclosed Non Ventilated</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>94.9 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>90 Hz</b>
Current	<b>11.6/5.8 A</b>	Power Factor	<b>86</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>No Design Code</b>	KVA Code	<b>N/A</b>
Drive End Bearing Size	<b>6207</b>	Opp Drive End Bearing Size	<b>6207</b>
UL	<b>Recognized</b>	CSA	<b>N</b>
CE	<b>N</b>	IP Code	<b>54</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>AC Permanent Magnet</b>	Starting Method	<b>Inverter Only</b>
Poles	<b>6</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>0 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>T</b>	Overall Length	<b>17.50 in</b>
Frame Length	<b>8.00 in</b>	Shaft Diameter	<b>1.125 in</b>
Shaft Extension	<b>2.62 in</b>	Assembly/Box Mounting	<b>F1 ONLY</b>
Inverter Load	<b>CONSTANT 20:1</b>		
Outline Drawing	<b>036277-800</b>	Connection Drawing	<b>EE7308T</b>

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

DRAWING REVISION	REVISION BY	DATE
A		
ECO-0114021	APPROVED BY	DATE
ECO DESCRIPTION		
NEW DRAWING		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±7° 30"
.XX	±0.03	[±0.76]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45°  
 CORNER FILLETS: R.02 [.51]  
 MACHINED SURFACES: 200 INCH/mm 5.1

DRAWN BY	SR
DATE	11/30/16
APPROVED BY	SR
DATE	11/30/16
REFERENCE	035829
THIRD ANGLE PROJECTION	

Regal Beloit America, Inc.	
DESCRIPTION	
OUTLINE	
180 FR. - CI C'BOX	
MATERIAL	PROCESS/FINISH
SIZE	DRAWING NUMBER
B	036277
SHEET	1 OF 1

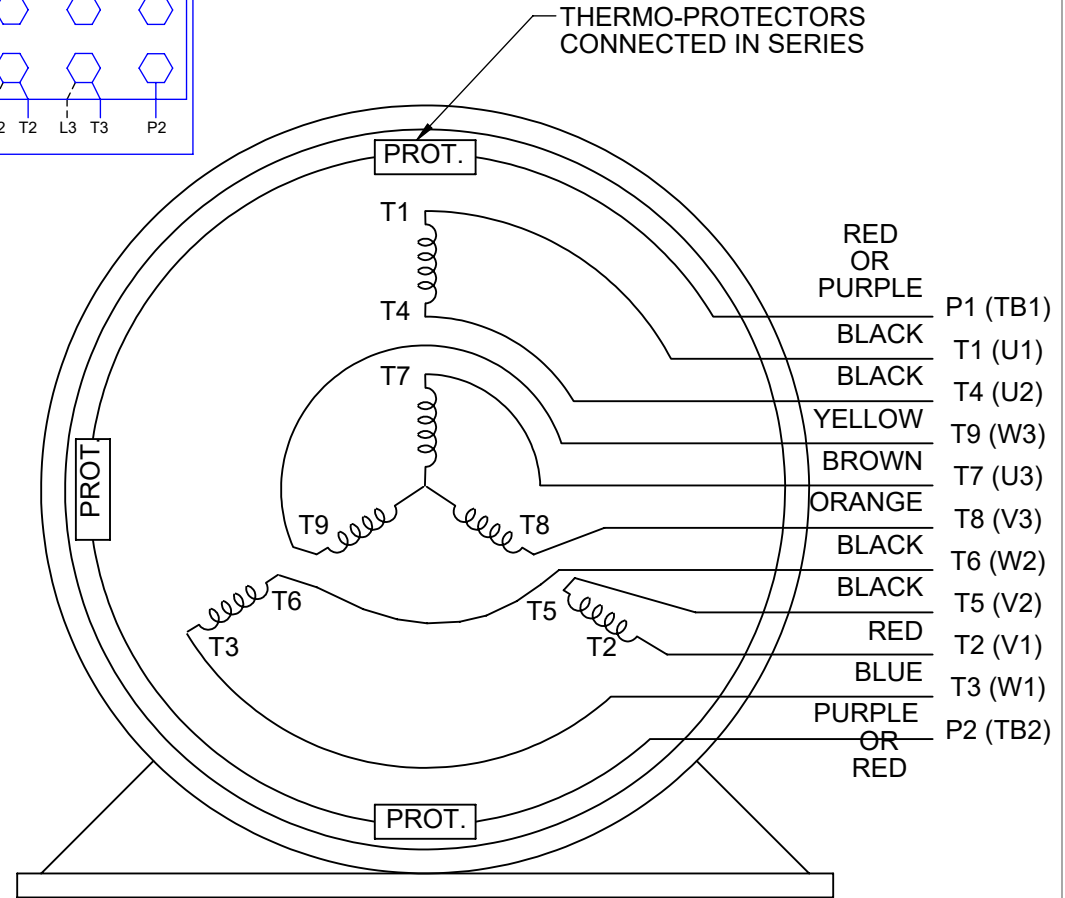
1000	182/184	19.50	8.61	7.50	5.50	3.75
800	182	17.5	6.61	5.50	4.50	2.75
DASH	FRAME	C	B	2F	2FF	BS

**HIGH VOLTAGE**



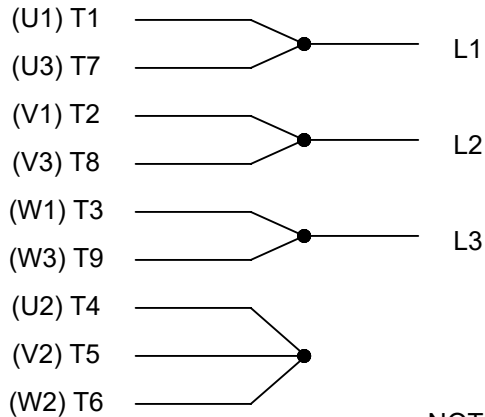
**THREE PHASE  
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS  
CONNECTED IN SERIES



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**



**VIEW OF TERMINAL END**

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

DRAWING REVISION T	REVISION BY ZR	DATE 01-14-2019		DRAWN BY SMC	Regal Beloit America, Inc.	
ECO ECO-0159915	APPROVED BY DR	DATE 01-15-2019		DATE 05-13-1992		
ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM				APPROVED BY TB	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b> 3 PHASE - DUAL VOLTAGE MOTOR	
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			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T	SHEET 1 OF 1
			THIRD ANGLE PROJECTION			

**CERTIFICATION DATA SHEET**

**Model#:** 184TPNSB10236 A      **WINDING#:** PM18406008 R3 1  
**CONN. DIAGRAM:** EE7308T      **ASSEMBLY:** F1 ONLY  
**OUTLINE:** 036277-800

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
5	3.7	1800	1800	184TC	TENV	NO KVA CODE	PM

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	90	230/460	11.6/5.8	INVERTER ONLY	CONTINUOUS	H4	1.0	40	3300

FULL LOAD EFF: 94.9	3/4 LOAD EFF: 0	1/2 LOAD EFF: 0	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 86	3/4 LOAD PF: -	1/2 LOAD PF: -	94.5	AC PERMANENT MAGNET	1 / .5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
14.6 LB-FT	/	- LB-FT -	- LB-FT -	49

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
0 dBA	10 dBA	0.39 LB-FT^2	0 LB-FT^2	0 SEC.	0	135 LBS.

**EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)**

R1	R2	X1	X2	XM
0	0.8	16.6	33.2	216

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	ENCODER	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
6207	6207						

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: PROVISIONS ONLY DYNAPAR HS35 NONE NONE PPR
BRAKE: NONE NONE

\*  
N  
O  
T  
E  
S  
\*

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

DATE: 06/28/2017 06:25:55 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

**Data Sheet**



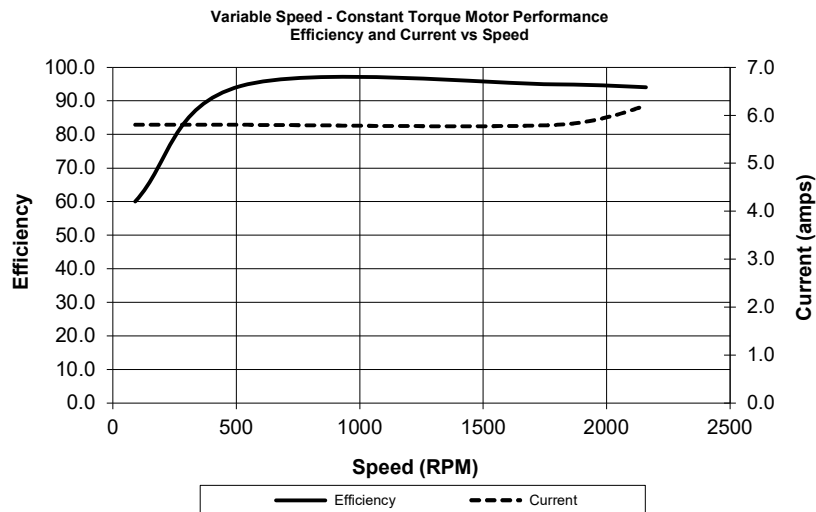
Date: 2/14/2017  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: RAMYA

Model: 184TPNSB10236  
 Catalog: SY007A  
 Winding: PM18406008  
 Submittal Data @ 460 V

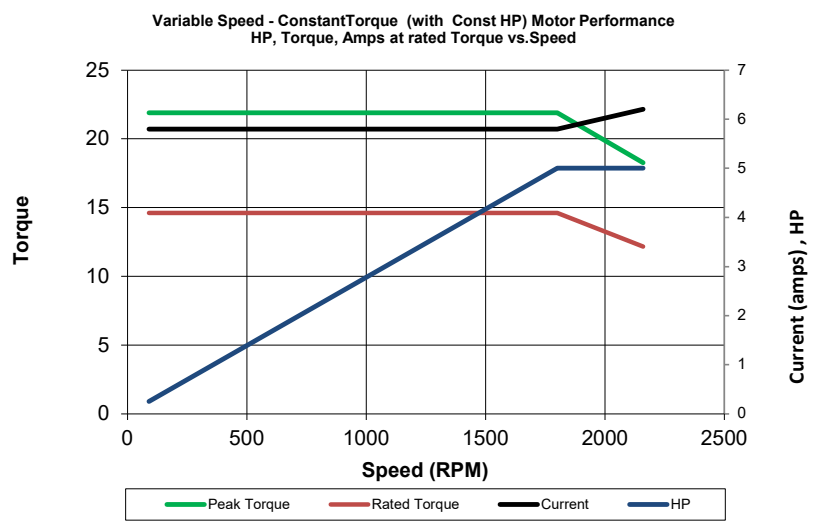
**Motor Load Data**

Load	0%	25%	50%	75%	100%	115%	125%	150%
Current (Amps)	1	0.0	0.0	0.0	5.8	2.32	0.0	
Torque (ft-lb)	0.0	3.7	7.3	11.0	14.6	16.8	18.3	
Efficiency (%)		0.0	0.0	0.0	94.9	38.0	0.0	

**Motor Speed Data**



Motor Characteristics			
HP	5.00		
Sync. RPM	1800		
Frame	184		
Enclosure	TENV		
Construction Type	PNS		
Voltage	460 V		
Frequency	90 Hz		
Motor P.F. (%)	86.0		
Reserve Tq Capability	150 %		
Temp Rise @ FL	49 ° C		
Insulation Class	H		
Duty	CONT		
Ambient	40 ° C		
Elevation	3300 feet		
Ref Wdg	PM18406008 R3		
Sound Pressure @ 1m	0 dBA		
Motor Wgt	135 Lb		
Rotor/Shaft wk <sup>2</sup>	0.39 Lb-Ft <sup>2</sup>		
CT Speed Range	20 :1		
VT Speed Range	0 :1		
Outline Dwg	036277-800		
Conn. Diag	EE7308T		
DE Bearing	6207		
ODE Bearing	6207		
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)
0.8	16.6	33.2	217



**Constant Torque (Constant Power) Load Points**

Hz	RPM	HP	ft-lb	Amps	Eff	Pk Tq
4	90	0.25	14.6	5.8	60	21.90
90	1800	5.0	14.6	5.8	94.9	21.90
108	2160	5.0	12.17	6.2	94	18.26