

PRODUCT INFORMATION PACKET

marathon[®]
Motors

Model No: 160MTFC6511
Catalog No: R333A
15,3600,TEFC,160M,3/60/230/460
TEFC



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REGAL[®]



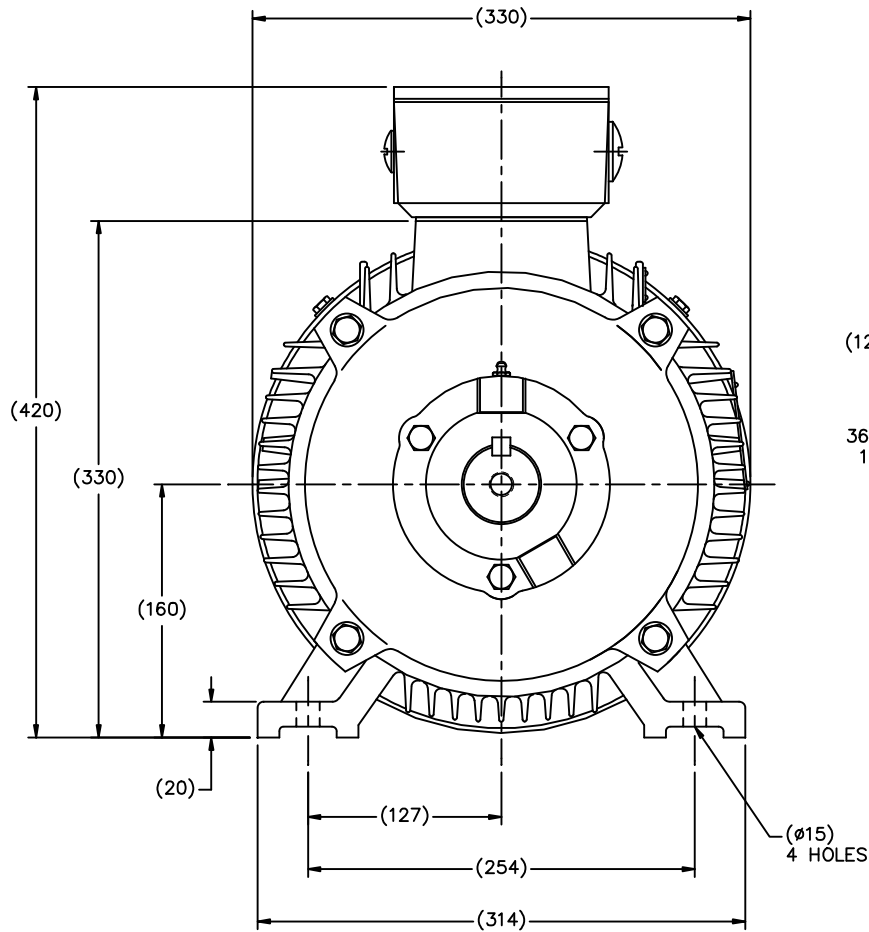
Nameplate Specifications

Output HP	15 Hp	Output KW	11.2 kW
Frequency	60 Hz	Voltage	230/460 V
Current	35.0/17.5 A	Speed	3545 rpm
Service Factor	1.15	Phase	3
Efficiency	91 %	Duty	Continuous
Insulation Class	F	Design Code	B
KVA Code	G	Frame	160M
Enclosure	Totally Enclosed Fan Cooled	Overload Protector	No
Ambient Temperature	40 °C	Drive End Bearing Size	6209
Opp Drive End Bearing Size	6209	UL	Recognized
CSA	Y	CE	Y
IP Code	55		

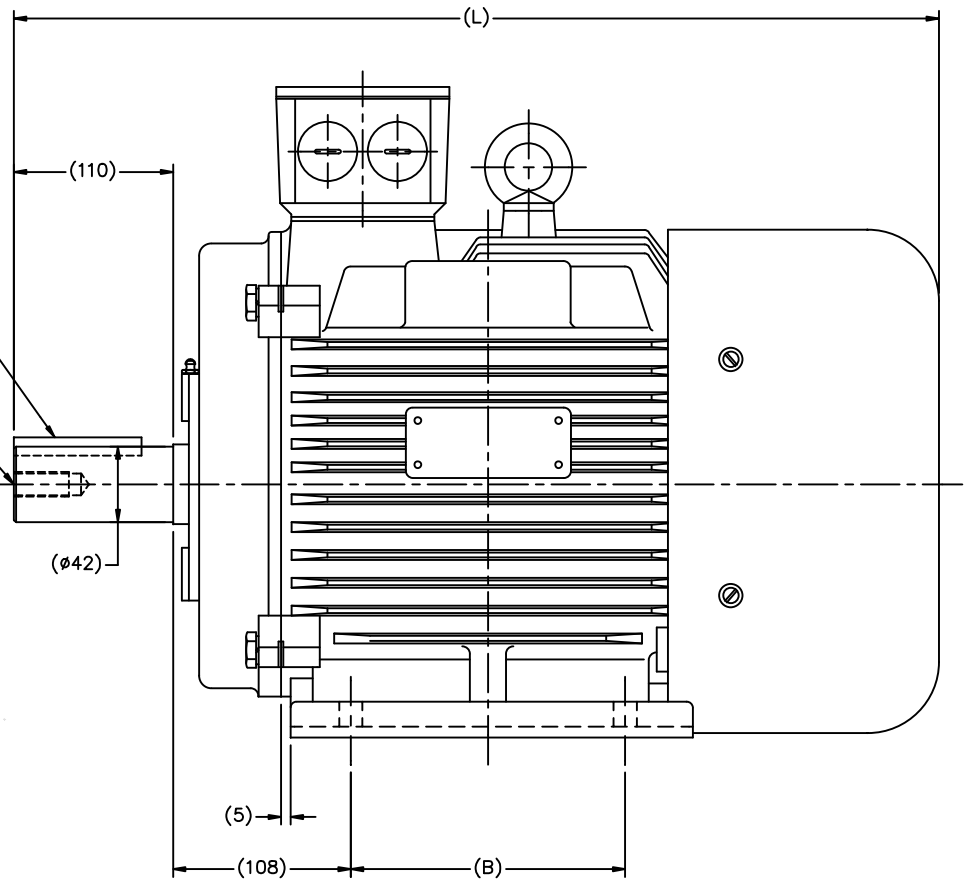
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Part Wdg Start & Wye Start Delta Run Or Inverter
Poles	2	Rotation	Reversible
Mounting	Rigid base	Motor Orientation	Horizontal
Drive End Bearing	Ball	Opp Drive End Bearing	Ball
Frame Material	Cast Iron	Shaft Type	IEC
Overall Length	23.62 in	Shaft Diameter	1.666 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3
Outline Drawing	B-SS622239	Connection Diagram	004172.03

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(12x12x84)
KEY
M16
36 DEEP
1 HOLE



DF160M1-2R	193315.60	600	210
DF160M2-2R	193318.60	600	210
DF160M-4R	193316.60	600	210
DF160L-2R	193321.60	645	254
DF160L-4R	193319.60	645	254
DF160M-6R	193314.60	600	210
FRAME	PART #	L	B

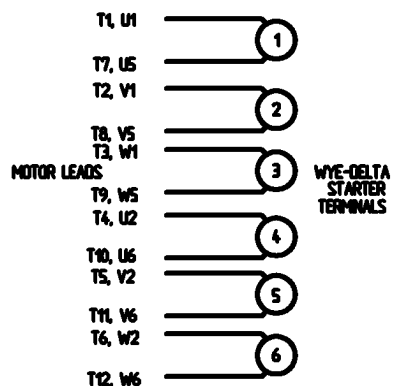
(MAY NOT BE DRAWN TO SCALE)

(DIMENSIONS ARE IN MILLIMETERS)

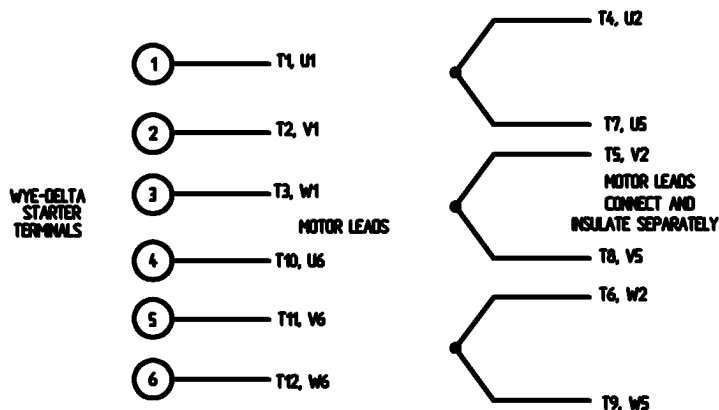
		TOLERANCES UNLESS SPECIFIED				DRAWN MSG 11-17-2010		
		DEC.	METRIC			CHK MJS 11-18-2010		
		.X	±2.5	TITLE OUTLINE - IEC PREMIUM		APPD SB 11-18-2010	SCALE 5=16	
		.XX	±.76	DF160-R (II)		REF	FMF HEBEI	
		.XXX	±.127	FINISH		PREV		
		.XXXX	±.0127	CAD FILE ss622239		SIZE B	DRAWING NO. SS622239	
NO.	REVISION	BY & DATE	CHK ANG ±7'30"	RFP 11-18-2010	DIST	PAGE OF	REV.	
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT								

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

LOW VOLTAGE CONNECTION

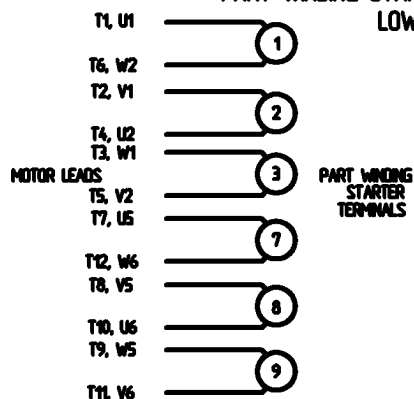


HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

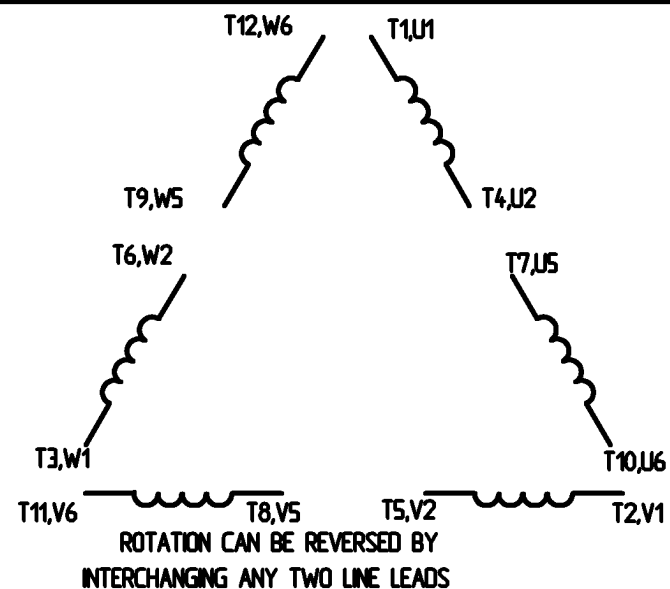
PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.

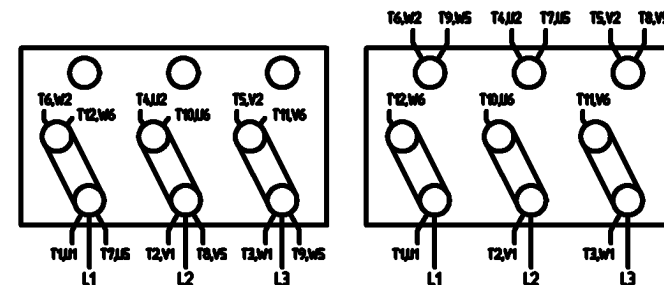
LINE LEADS



12 LEAD DELTA CONNECTION ACROSS THE LINE START
(FOR Y START DELTA RUN, REMOVE THE JUMPERS)

LOW VOLTAGE
MUST BE REWIRED
AS SHOWN

HIGH VOLTAGE
FACTORY WIRED FOR HIGH
VOLTAGE AS SHOWN



				TOLERANCES UNLESS SPECIFIED		ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN CW 08/28/02 CHK APPD SCALE 1:1 REF FMF PREV
				DEC.	INCHES		TITLE DELTA - WYE CONNECTION DIAGRAM IEC CAST IRON MOTORS
				X	+ .1		
				XX	+ .01		
				XXX	+ .005		
				XXXX	+ .0005		
NO.	REVISION	BY & DATE	CHK	ANG	+ 1/2°	FINISH	PREV
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				DST			DRAWING NO. 004172-03
							REV.

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ERROR: syntaxerror  
OFFENDING COMMAND: --nostringval--
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STACK:
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/CB  
-dictionary-  
/Pscript_WinNT_Compact  
-dictionary-
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P.O. BOX 9003
WAUSAU, WI 54401-9003
PH. 715-675-3311

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: 004172.03
CONN. DIAGRAM: B-SS622239
OUTLINE: T12902027
WINDING: NONE 3
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: 160MTFC6511
CAT #: R333A
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN	
15	11.2	3600	3545	160M	TEFC	TEFC	G	N	
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#200/400	36/17.5&27/13.5	PWS & YDRUN OR INV	CONT	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	90.2	GTD EFF	90.2	ELECT. TYPE	SO CAGE INV RATED
F.L. PF	88.5	3/4 LD PF	87.5	1/2 LD PF	83.0		90.2		

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	47.5	LB-FT	214%	B.D. TORQUE	56.5	LB-FT	255%	F.L. RISE (°C)	44
22.2 LB-FT											

@ 3 FT. DBA	79	POWER DBA	0.00	ROTOR WK ³ LB-FT ²	0	MAX. LOAD WK ² LB-FT ²	20	SAFE STALL TIME SEC.	2	STARTS/HOUR	265	MOTOR WGT LB.	
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*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	STANDARD	ODE BRACKET TYPE	STANDARD	MOUNT TYPE	RIGID	MOTOR ORIENTATION	HORIZONTAL	SEVERE DUTY	UM SEVERE	HAZARDOUS LOCATION	NONE	DRIP COVER	NO	SCREENS	NONE	PAINT	BLUE (ENAMEL)
BEARINGS	DE ODE BALL BALL 6209	GREASE	POLYREX EM	SHAFT TYPE	STANDARD IEC	SPECIAL DE	NONE	SPECIAL ODE	NONE	SHAFT	1045 HOT ROLLED (C-204	MATERIAL	CAST IRON	FRAME MATERIAL			

THERMOSTATS	NONE	PROTECTORS	NOT	WDG RTD's	NONE	BRG RTD's	NONE	THERMISTORS	NONE	CONTROL	FALSE	SPACE HEATERS	NA
R1 (ohms/ph)	0	R2 (ohms/ph)	0	X1 (ohms/ph)	0	X2 (ohms/ph)	0	Xm (ohms/ph)	0	VIBRATION (in/sec)	0.080	FLOAT ODE	

INVERTER TORQUE: CONSTANT 2:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED

ENCODER: NONE	NONE	BRAKE: NONE	NONE
FT-LB: NA	NONE	FT-LB: NA	NONE
VOLTAGE: NONE	NONE	VOLTAGE: NONE	NONE
UL: VINS, CONST UL REC		UL: VINS, CONST UL REC	

PREPARED BY: EARL BABBITTS
DATE: 5/5/2017

FORM: 3531 REV_4 2/27/06

Data Sheet

160MTFC6511

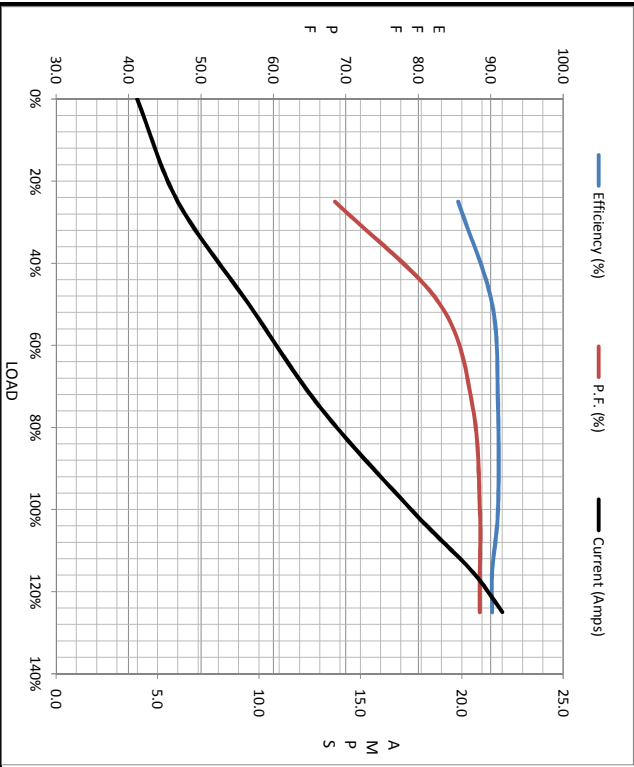


Submital
Data @ 460 V

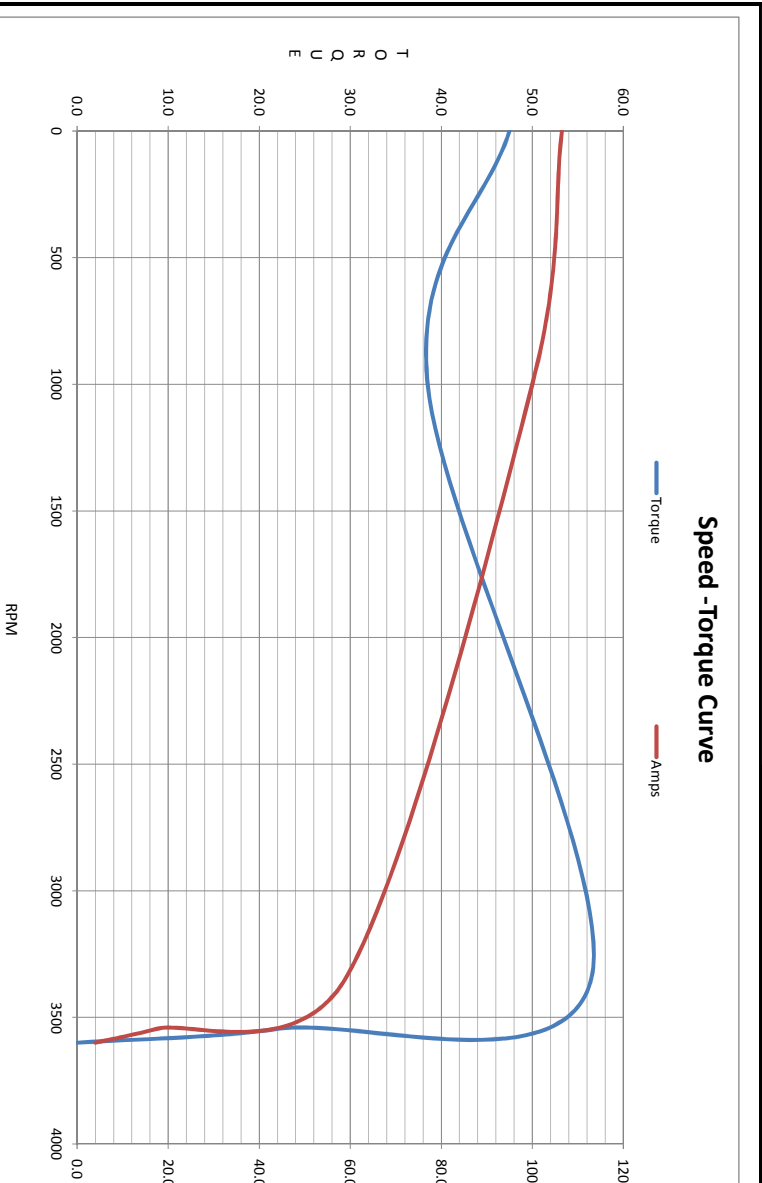
Date: 5/5/2017
Customer: EARL BABBITTS
Attention: EARL BABBITTS
Submitted by:

Load	Motor Load Data									
	0%	25%	50%	75%	100%	115%	125%	LR		
Current (Amps)	4.0	6.0	9.5	13.0	17.5	20.5	22.0	107		
Torque (ft-lb)	0.00	5.5	11.0	16.5	22.2	25.5	28.0	47.5		
RPM	3600	3585	3575	3560	3545	3535	3530	0		
Efficiency (%)		85.5	90.2	91.0	91.0	90.2	90.2			
P.F. (%)	13.0	68.5	83.0	87.5	88.5	88.5	88.5	44.0		

	Motor Speed Data					Information Block																		
	LR	Pull-Up	BD	Rated	Idle	HP	Frame	Enclosure	Construction	Voltage	Frequency	Design	LR Code letter	Service Factor	Temp Rise @ FL	Duty	Ambient Elevation	Rotor/Shaft wk ²	Sound Pressure @ 1M	VFD Rating	Outline Dwg	Conn. Diag	Additional Specifications:	
Speed (RPM)	0	1000	3345	3545	3600	15.0	160	TEFC	TFC	30/460#200/40 V	60	B	G	1.15	CONT	40 °C	1,000 feet	0.00 Lb-Ft ²	70 dbA	CONSTANT 2:1	B-SS62239	004172.03		
Current (Amps)	107	100	59.0	17.5	4.0		3600																	
Torque (ft-lb)	47.5	38.5	56.5	22.2	0.00																			



EQUIV CKT (OHMS / PHASE)			
R1	R2	X1	X2
0.0000	0.0000	0.0000	0.0000
Xm			
0.0000			



Date: 5/5/2017
 Customer: EARL BABBITTS
 Attention: EARL BABBITTS
 Submitted by: EARL BABBITTS



Torque Capability Curve

REF: 160MTFC6511
 Data @ 460 Volts

HP	0.00	0.00	15	15	15	125
Min CT RPM			Base RPM	CHP RPM	Max RPM	Max CHP RPM
0.00	0	0	60	66	67	460
Frequency (HZ)	0	0	3,545	4,000	4,000	2,582
RPM	0	0	17.5	17.5	17.5	146
Current (Amps)	17.5	17.5	22.2	22.2	19.7	245
Rated Tq (ft-lb)	52.0	52.0	52.0	40.3	40.3	93.4
Peak Tq (ft-lb)						

Motor Speed Data

	Locked Rotor	Pull-Up	Breakdown	Rated Load	Idle
Speed (RPM)	0	750	1375	1475	1500
Current (Amps)	295	261	176	55.1	21.4
Torque (ft-lbs)	235	200	325	142	0.00

Information Block

HP	15.0
Sync. RPM	3,600
Frame	160
Enclosure	TEFC
Construction	TEFC
Voltage	230/460#200/400
Frequency	60 Hz
Duty	CONT
Design	B
LR Code letter	G
Poles	2
Temp Rise @ FL	44 °C
Ambient	40 °C
Elevation	1,000 feet
Ref Wdg	T12902027
R #	NONE
dBa @ 1M	70
VFD rating	CONSTANT 2:1
OUTLINE:	B-SS622239
CONN DIAG:	004172.03

