PRODUCT INFORMATION PACKET

Model No: 143TTGN16539
Catalog No: C320B
1 HP Explosion Proof Motor, 3 phase, 1800 RPM, 230/460 V, 143TC Frame, EPFC
Explosion Proof Motors

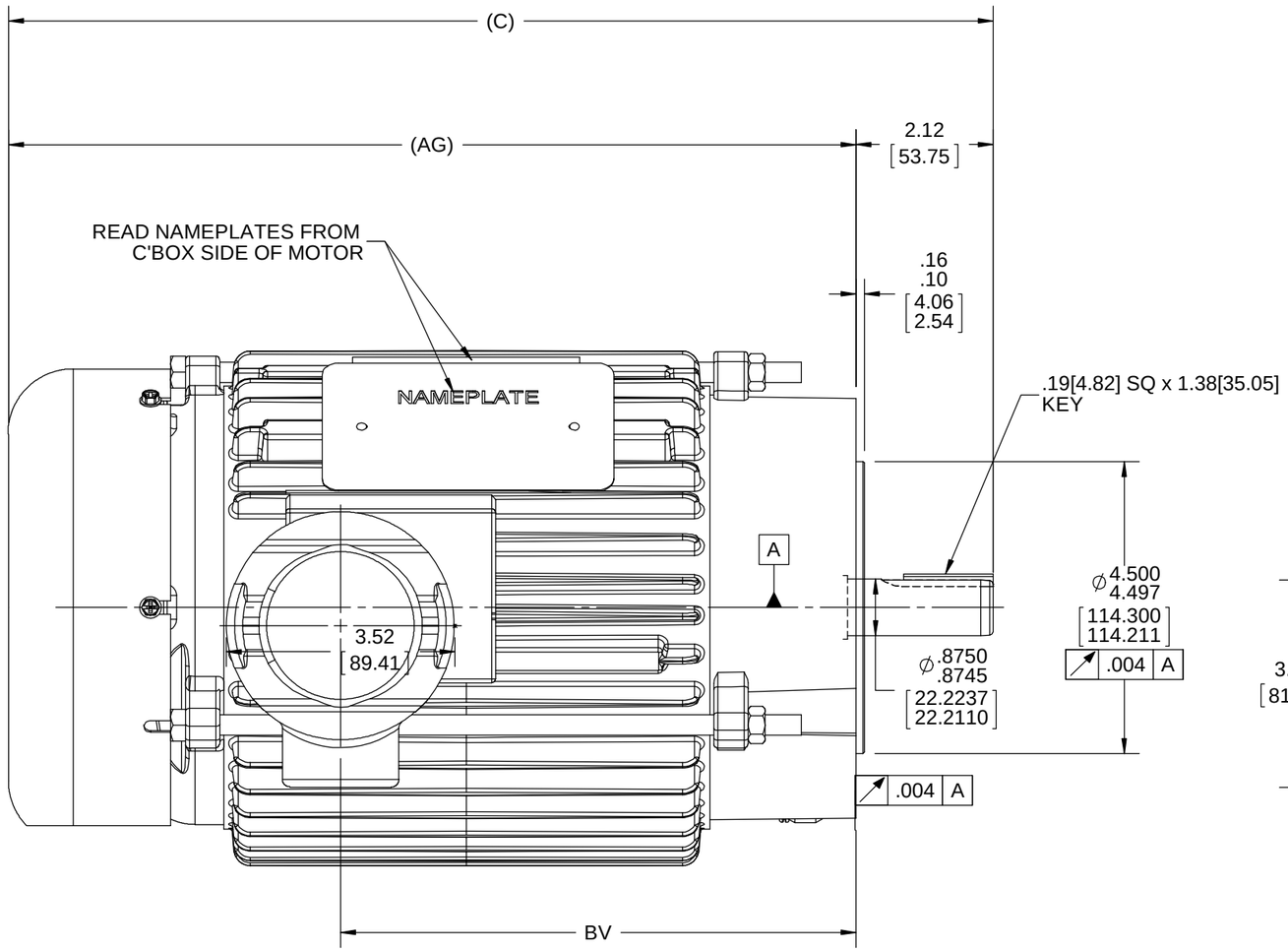
marathon® Motors

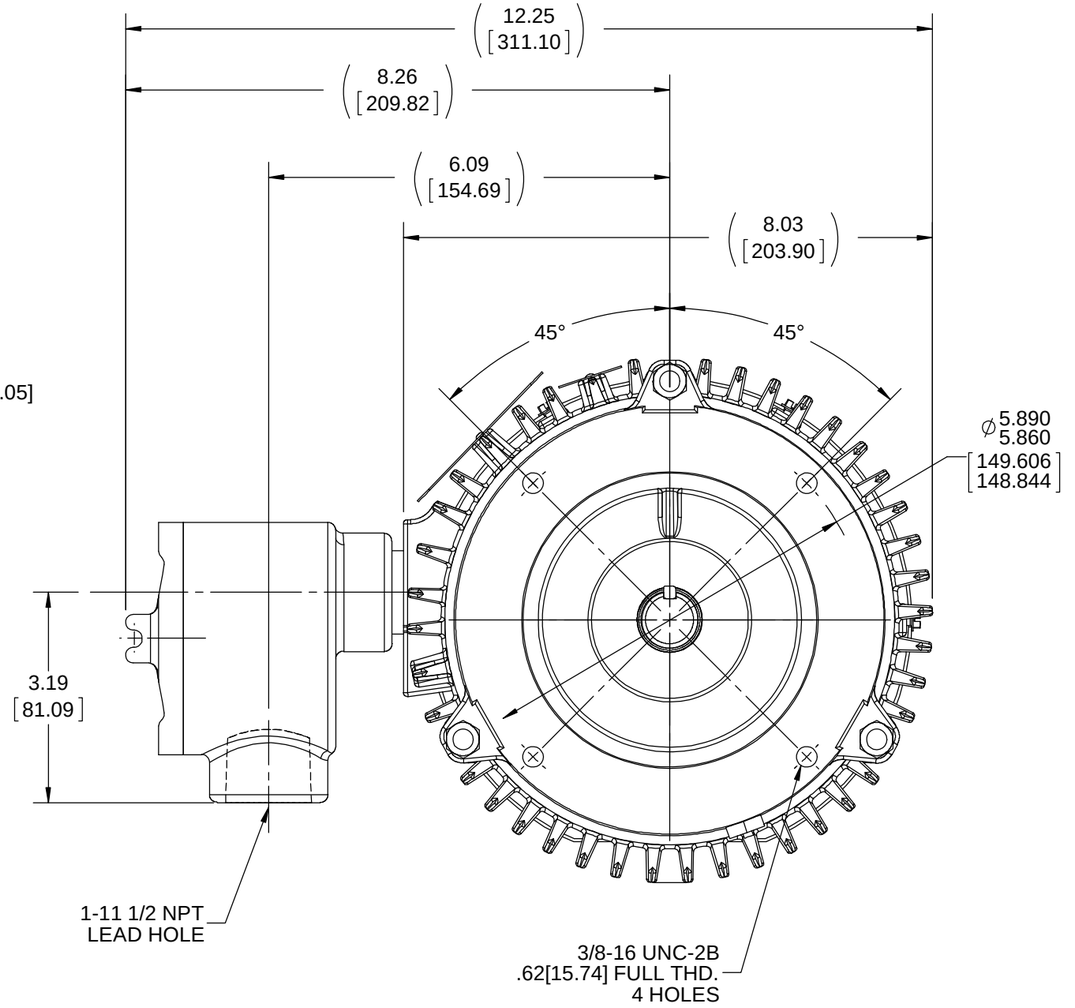
Nameplate Specifications

Output HP	1 Hp	Output KW	0.75 kW
Frequency	60 Hz	Voltage	230/460 V
Current	3.3/1.7 A	Speed	1765 rpm
Service Factor	1.15	Phase	3
Efficiency	85.5 %	Power Factor	68
Duty	Continuous	Insulation Class	B
Design Code	B	KVA Code	P
Frame	143TC	Enclosure	Explosion Proof Fan cooled
Thermal Protection	Thermostats (N/C)	Ambient Temperature	40 °C
Drive End Bearing Size	6205	Opp Drive End Bearing Size	6203
UL	UL Listed And CSA Certified	CSA	Y
CE	N	IP Code	54
Hazardous Location	DIV 1 EXP PROOF CL I GR D CL II GR FG T3B	Number of Speeds	1

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	11.8 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	15.19 in
Frame Length	7.50 in	Shaft Diameter	0.875 in
Shaft Extension	2.12 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 10:1		
Outline Drawing	108729-750	Connection Drawing	EE7308T





NOTE:
1.BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.

DASH	C	AG	BV
750	15.19[385.82]	13.07[331.97]	7.95[201.93]

DRAWING REVISION	REVISION BY	DATE
A		
ECO	APPROVED BY	DATE
ECO-0149181		

ECO DESCRIPTION: OUTLINE CONVERSION PROJECT

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 / 5.1 mm
mm SHOWN IN [BRACKETS]

DRAWN BY	H. ADIKE
DATE	05/21/2018
APPROVED BY	JD
DATE	7/19/2018
REFERENCE	100617
THIRD ANGLE PROJECTION	

Regal Beloit America, Inc.

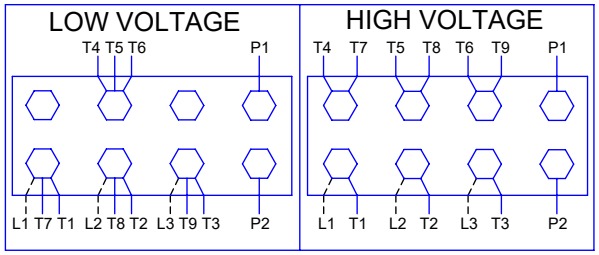
DESCRIPTION: OUTLINE
140 FR.BB-EXP. PR. -TS-'C'FACE(629 NEW DESIGN)

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
B	108729	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

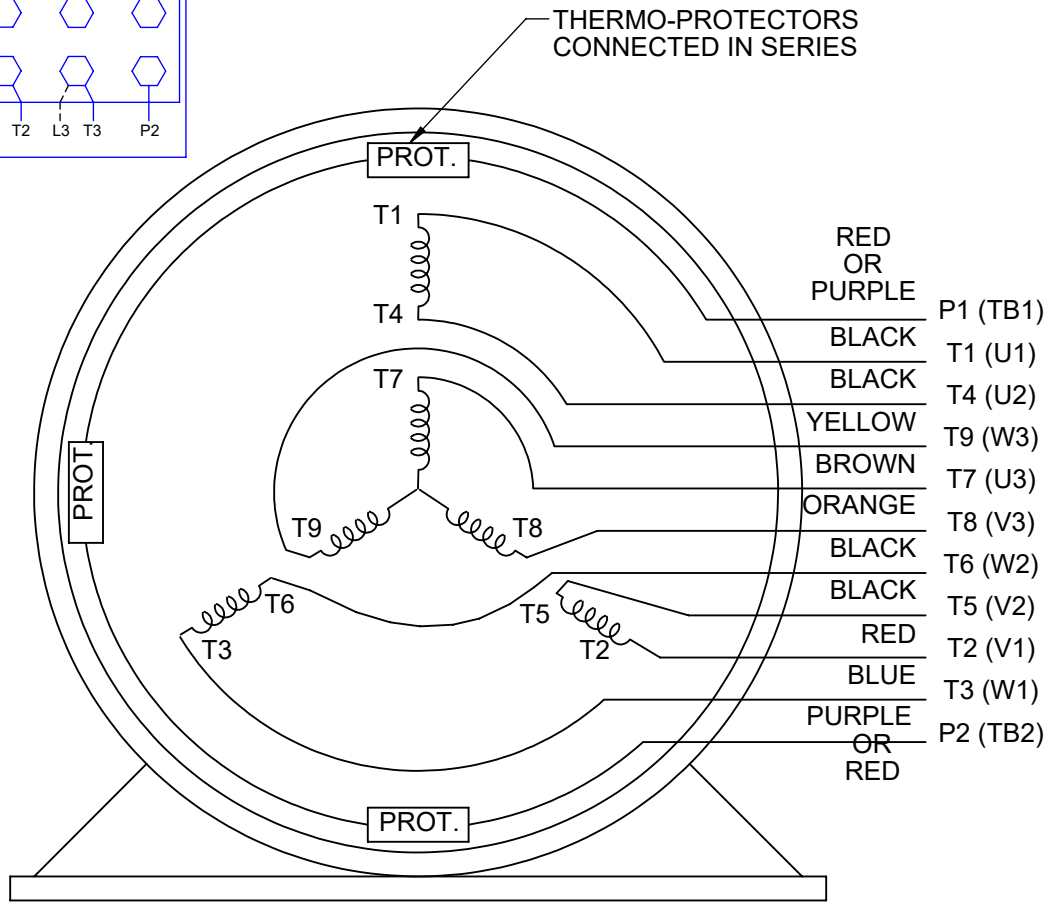


NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE

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

THREE PHASE DUAL VOLTAGE MOTOR



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: CONN DIAGRAM-INTERNAL
				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

P.O. BOX 8003
WAUSAU, WI 54401-8003
PH. 715-675-3311

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #:
CONN. DIAGRAM: EE7308T
OUTLINE: A-108729-750
WINDING #: ZT4257 R2 3

CUSTOMER PO#:
MODEL #: 143TTGN16539 AA
CUSTOMER PART #:
MOUNTING: F1 ONLY

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
1&3/4	0.75&0.56	1800	1765&1470	143TC	EPFC	P	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	230/460&190/380	3.3/1.65&3/1.5	LINE OR INVERTER	CONTINUOUS	B3	1.15/1.15	40

FULL LOAD EFF:	85.5&85	**3/4 LOAD EFF:**	84	**1/2 LOAD EFF:**	81.5	**GTD. EFF**	**ELEC. TYPE**
FULL LOAD PF:	68&65.5	**3/4 LOAD PF:**	59.5	**1/2 LOAD PF:**	46.5	82.5	SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
3 **LB-FT**	34 / 17	13.7 **LB-FT** 457 %	16.8 **LB-FT** 560 %	30

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
62 **dBA**	72 **dBA**	0.12 **LB-FT^2**	0 **LB-FT^2**	15 **SEC.**	2	48 **LBS.**

*** SUPPLEMENTAL INFORMATION ***

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

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	T	NONE	NONE	1144 STRESSPROOF (C-223)	CAST IRON
6205	6203						

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

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE NONE
NONE NONE PPR

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

NOTES

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PREPARED BY: Dinesh Suddula **DATE:** 02/12/2019 04:57:27 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 1/2/2019
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® electric

143TTGN16539

Submittal

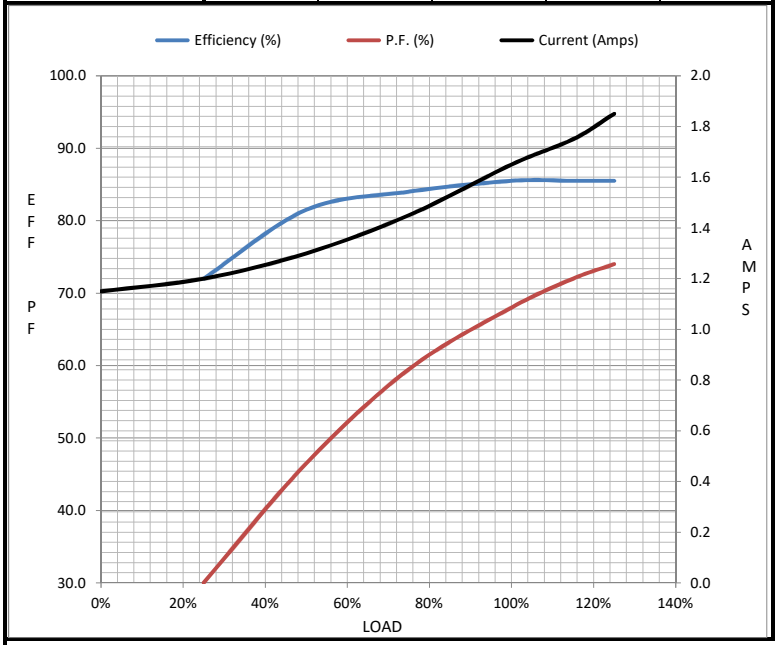
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.15	1.20	1.30	1.45	1.65	1.75	1.85	17.0	
Torque (ft-lb)	0.00	0.75	1.50	2.25	3.0	3.5	3.8	13.7	
RPM	1800	1790	1785	1775	1765	1,760	1755	0	
Efficiency (%)		72.0	81.5	84.0	85.5	85.5	85.5		
P.F. (%)	7.5	30.0	46.5	59.5	68.0	72.0	74.0	69.5	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	115	1270	1765	1800
Current (Amps)	17.0	16.0	11.0	1.65	1.15
Torque (ft-lb)	13.7	12.5	16.8	3.0	0.00



Information Block

HP	1.0	
Sync. RPM	1800	
Frame	145	
Enclosure	EPFC	
Construction	TFN	
Voltage	230/460#190/380	V
Frequency	60	Hz
Design	B	
LR Code letter	P	
Service Factor	1.15	
Temp Rise @ FL	30	°C
Duty	CONT	
Ambient	40	°C
Elevation	1,000	feet
Rotor/Shaft wk²	0.12	Lb-Ft²
Ref Wdg	ZT4257 R2	
Sound Pressure @ 1M	62	dBA
VFD Rating	CONSTANT 10:1	
Outline Dwg	A-100617-750	
Conn. Diag	EE7308T	

Additional Specifications:

0

0

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
2.4250	1.6020	3.1050	2.7720	75.8630

Speed -Torque Curve