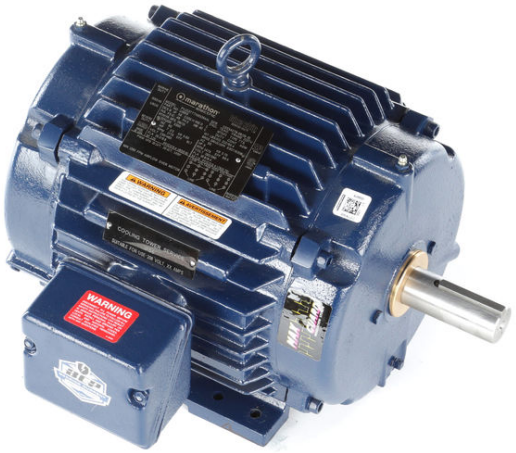
PRODUCT INFORMATION PACKET

Model No: 213TTTN16539
Catalog No: U1869
7.50 HP Severe Duty Motor, 3 phase, 1800 RPM, 230/460 V, 213TV Frame, TEAO
Low Voltage NEMA Cooling Tower Motors



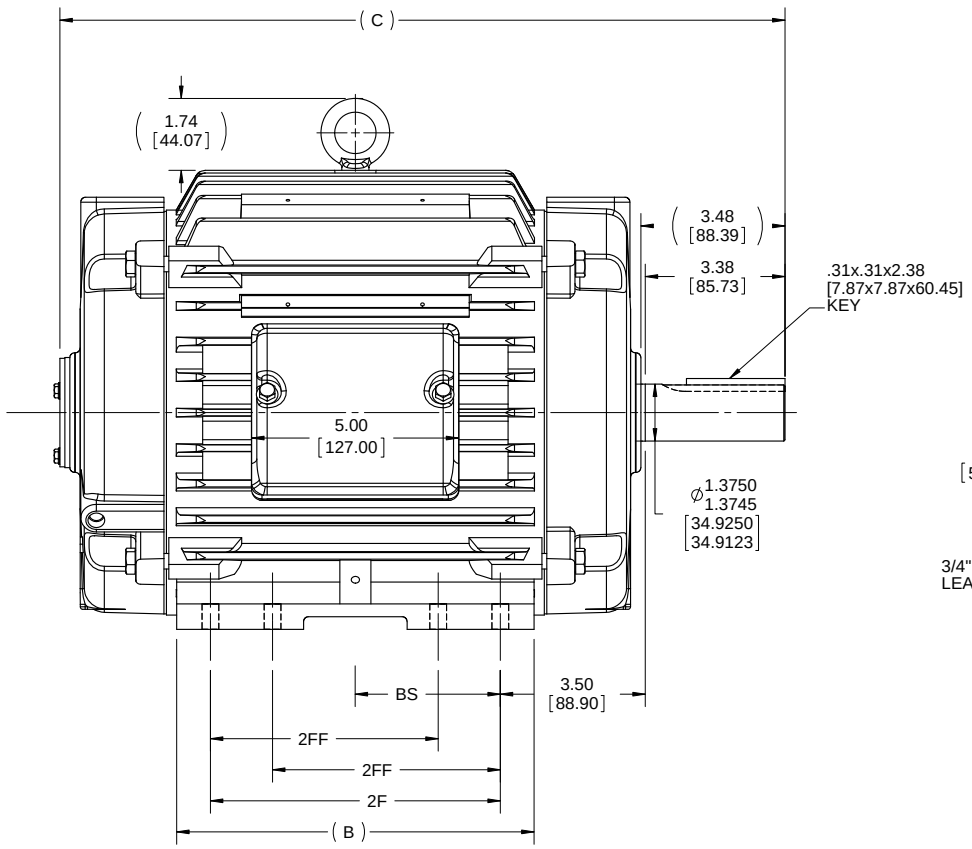
marathon® Motors

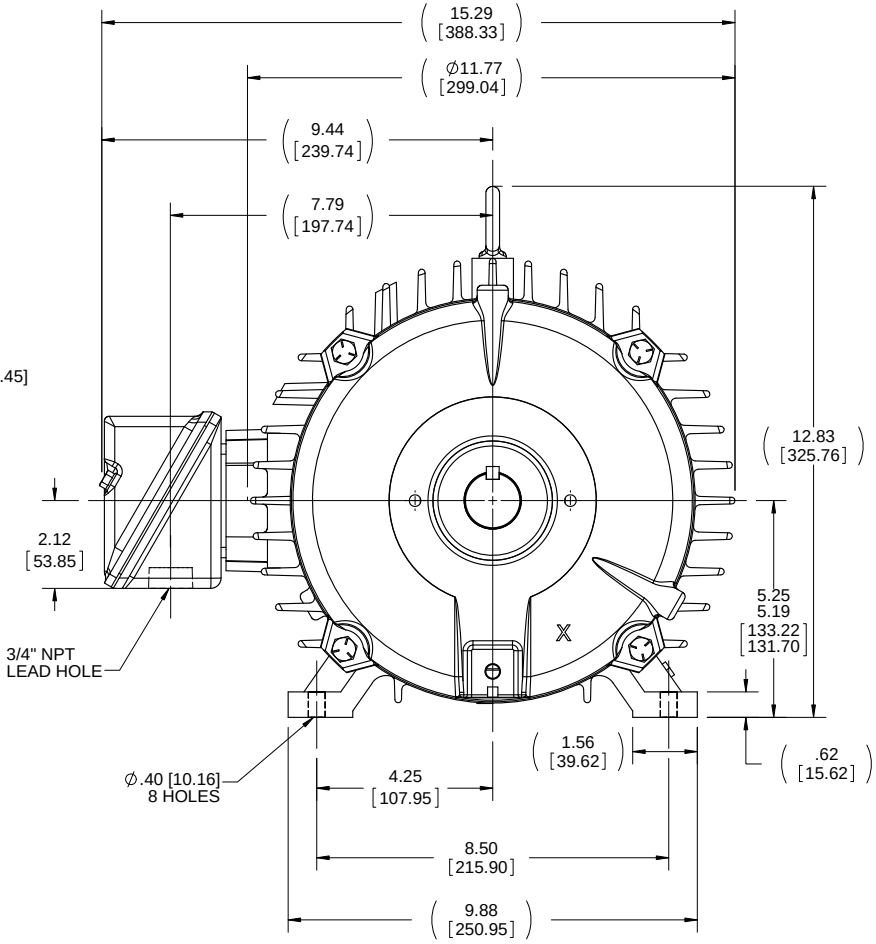
Nameplate Specifications

Output HP	7.50 Hp	Output KW	5.6 kW
Frequency	60 Hz	Voltage	230/460 V
Current	19.2/9.6 A	Speed	1770 rpm
Service Factor	1.15	Phase	3
Efficiency	91.7 %	Power Factor	80
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	H
Frame	213TV	Enclosure	Totally Enclosed Air Over
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6307	Opp Drive End Bearing Size	6208
UL	Recognized	CSA	Y
CE	N	IP Code	56

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	1.17 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal Or Up Or Down	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	17.51 in
Frame Length	9.12 in	Shaft Diameter	1.375 in
Shaft Extension	3.48 in	Assembly/Box Mounting	F1/F2 Capable





NOTES:

1. CONDUIT BOX CAN BE ROTATED IN 90˚ STEPS.
2. CONDUIT BOX CAN BE MOUNTED IN OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180˚.
3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

1212	215	20.51 [520.95]	11.76 [298.70]	10.00 [254.00]	7.00 [177.80]	5.00 [127.00]
912	213/215	17.51 [444.75]	8.63 [219.20]	7.00 [177.80]	5.50 [139.70]	3.50 [88.90]
DASH	FRAME	C	B	2F	2FF	BS

DRAWING REVISION: C	REVISION BY: M. VERBICK	DATE: 5-29-2015
ECO: ECO-0078542	APPROVED BY	DATE
ECO DESCRIPTION: TITLE BLOCK LOGO UPDATE		

TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±0.5˚
.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: 125 INCH / 3.2 mm
mm SHOWN IN [BRACKETS]

DRAWN BY: UD	Regal Beloit America, Inc.	
DATE: 11-14-2013		
APPROVED BY: SR	DESCRIPTION: OUTLINE 210 FR-STD-STD-T-TENV	
DATE: 11-14-2013		
REFERENCE: 037728	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: 037907	SHEET: 1 OF 1

EE7308

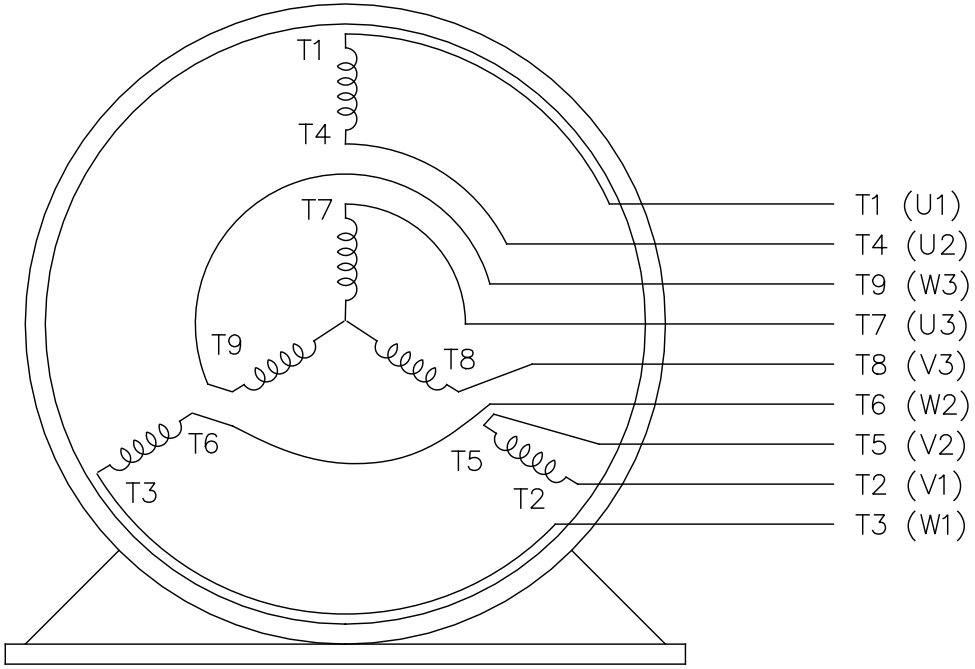
THREE PHASE
DUAL VOLTAGE MOTOR

HIGH VOLTAGE

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

LOW VOLTAGE

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



VIEW OF TERMINAL END

REF.
WINDING DIAGRAM

T8Y, T2Y, T2BL, T4BX, T2EC, T2G
T6BZ, T2B, T6BL, T4AV, T6B, T4B

OPTIONAL CORD CONNECTION

L1 — WHITE
L2 — RED
L3 — BLACK

NO.	REVISION	BY & DATE	CHK
5	CHG TO REGAL LOGO	SL 09/10/2015	AB
4	REVISED IEC NOTATIONS	MSG 11/15/2011	CMN
3	ADDED IEC NOTATIONS... (U1), (V1) ETC. MU95194	MSG 5/10/2010	MJS
2	ADDED THE OPTIONAL CORD CONNECTION MU46318	RDH 04/24/2003	DRS
1	REDRAWN	RM 11/20/1990	

TOLERANCES UNLESS SPECIFIED

DEC.	INCHES
.X	±.1
.XX	±.02
.XXX	±.005
.XXXX	±.0005
ANG	±7'30"

Regal Beloit America, Inc.

TITLE CONNECTION DIAGRAM
3ø – DUAL VOLTAGE MOTOR

MAT'L.
FINISH
CAD FILE ee7308
RFP
DIST WP

DRAWN RM	11/20/1990
CHK ML	11/21/1990
APPD SAS	04/24/2003
SCALE	1=1
REF	
FMF	
PREV	

SIZE A | DRAWING NO. EE7308 | PAGE OF | REV. 5

CERTIFICATION DATA SHEET

Model#:	213TTTN16539 AA	**WINDING#:**	K2134158 R23 6
CONN. DIAGRAM:	A-EE7308	**ASSEMBLY:**	F1/F2 CAPABLE
OUTLINE:	037907-912		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
7 1/2&5	5.6&3.7	1800	1770&1475	213TV	TEAO	H	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#190/380	19.2/9.6&16.8/8.4	LINE OR INVERTER	CONTINUOUS	F3	1.15/1.15	40	3300

FULL LOAD EFF: 91.7&89.5	3/4 LOAD EFF: 91	1/2 LOAD EFF: 90.2	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 80&76	3/4 LOAD PF: 74	1/2 LOAD PF: 63	91	SQ CAGE INV RATED	9 / 4.5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
22.3 LB-FT	127 / 63.5	52 LB-FT 233	72 LB-FT 323	0

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
- dBA	- dBA	0.95 LB-FT^2	- LB-FT^2	25 SEC.	-	165 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL OR UP OR DOWN	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6307	BALL 6208	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			
NONE	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: 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 *

DATE: 06/22/2017 06:47:04 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 20-06-2017
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon electric

213TTTN16539

Submittal

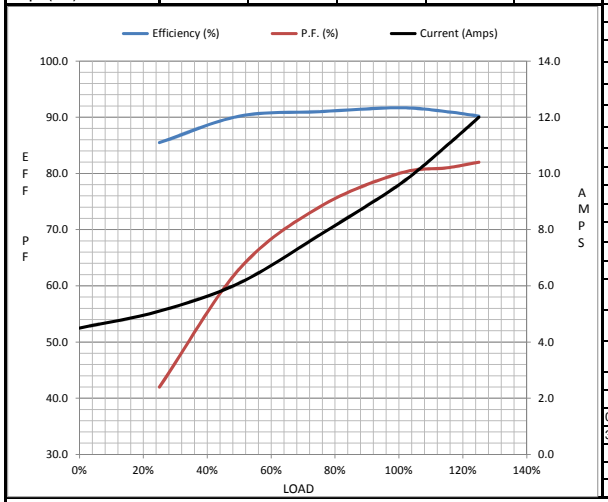
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	4.5	5.1	6.1	7.8	9.6	11.0	12.0	63.5	
Torque (ft-lb)	0.00	5.5	11.0	16.5	22.3	25.5	28.0	52.0	
RPM	1800	1790	1785	1775	1770	1,765	1760	0	
Efficiency (%)		85.5	90.2	91.0	91.7	91.0	90.2		
P.F. (%)	5.5	42.0	63.0	74.0	80.0	81.0	82.0	45.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1600	1770	1800
Current (Amps)	63.5	57.0	45.0	9.6	4.5
Torque (ft-lb)	52.0	49.0	72.0	22.3	0.00



Information Block

HP	7.5
Sync. RPM	1800
Frame	213
Enclosure	TEAO
Construction	TTS
Voltage	230/460#190/380V
Frequency	60 Hz
Design	B
LR Code letter	H
Service Factor	1.15
Temp Rise @ FL	0 ° C
Duty	CONT
Ambient	40 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	0.95 Lb-Ft²
Ref Wdg	K2134158 R23
Sound Pressure @ 1M	999 dBA
VFD Rating	CONSTANT 20:1
Outline Dwg	037907-912
Conn. Diag	A-EE7308
Additional Specifications:	
0	
365THFS8036	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.5970	0.4540	2.3440	3.5000	52.1640

Speed -Torque Curve