PRODUCT INFORMATION PACKET

Model No: 324TTFS16105
Catalog No: L416B
XRI® General Purpose General Purpose Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 900 & 750 RPM, 324T Frame, TEFC

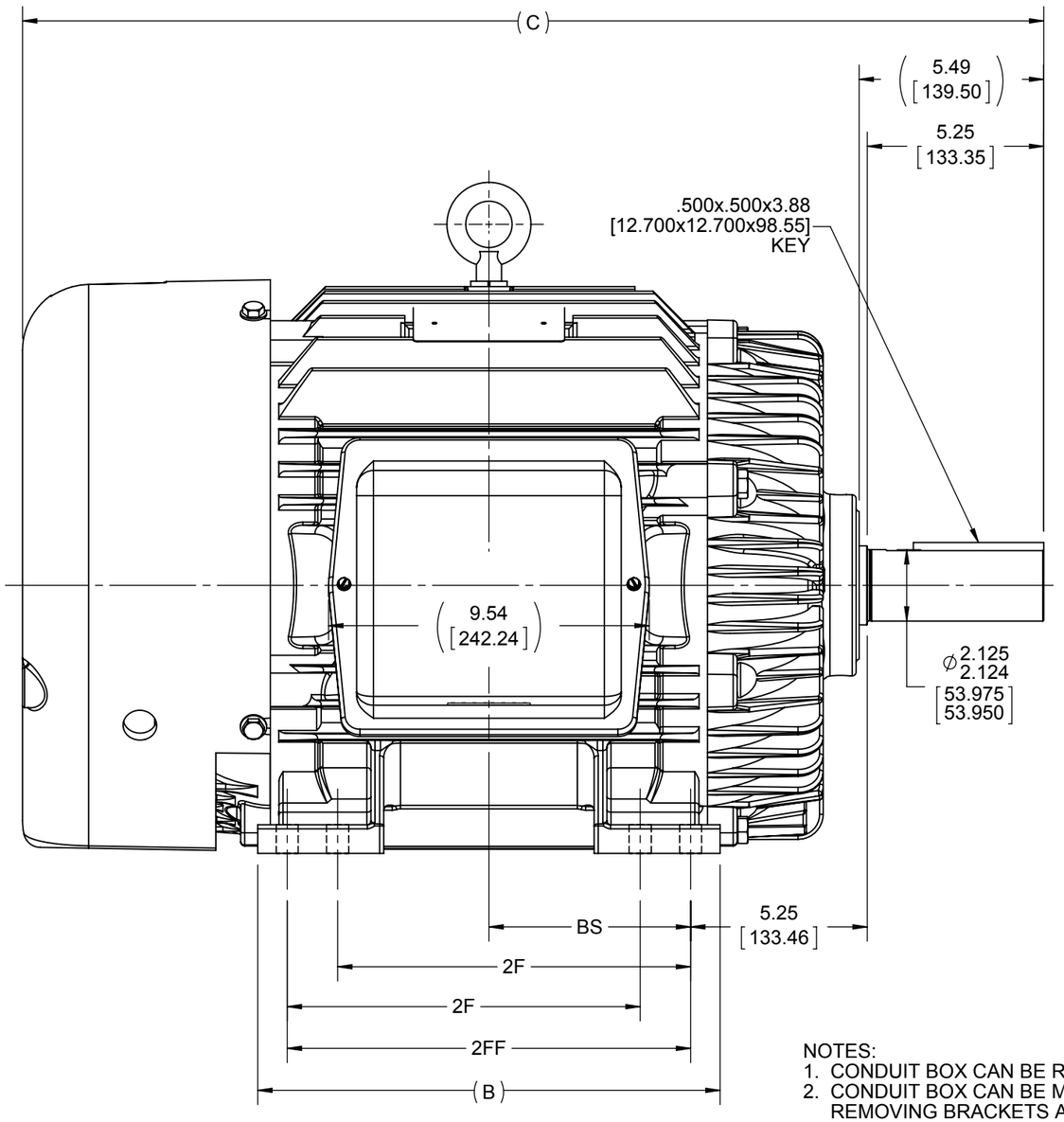
marathon® Motors

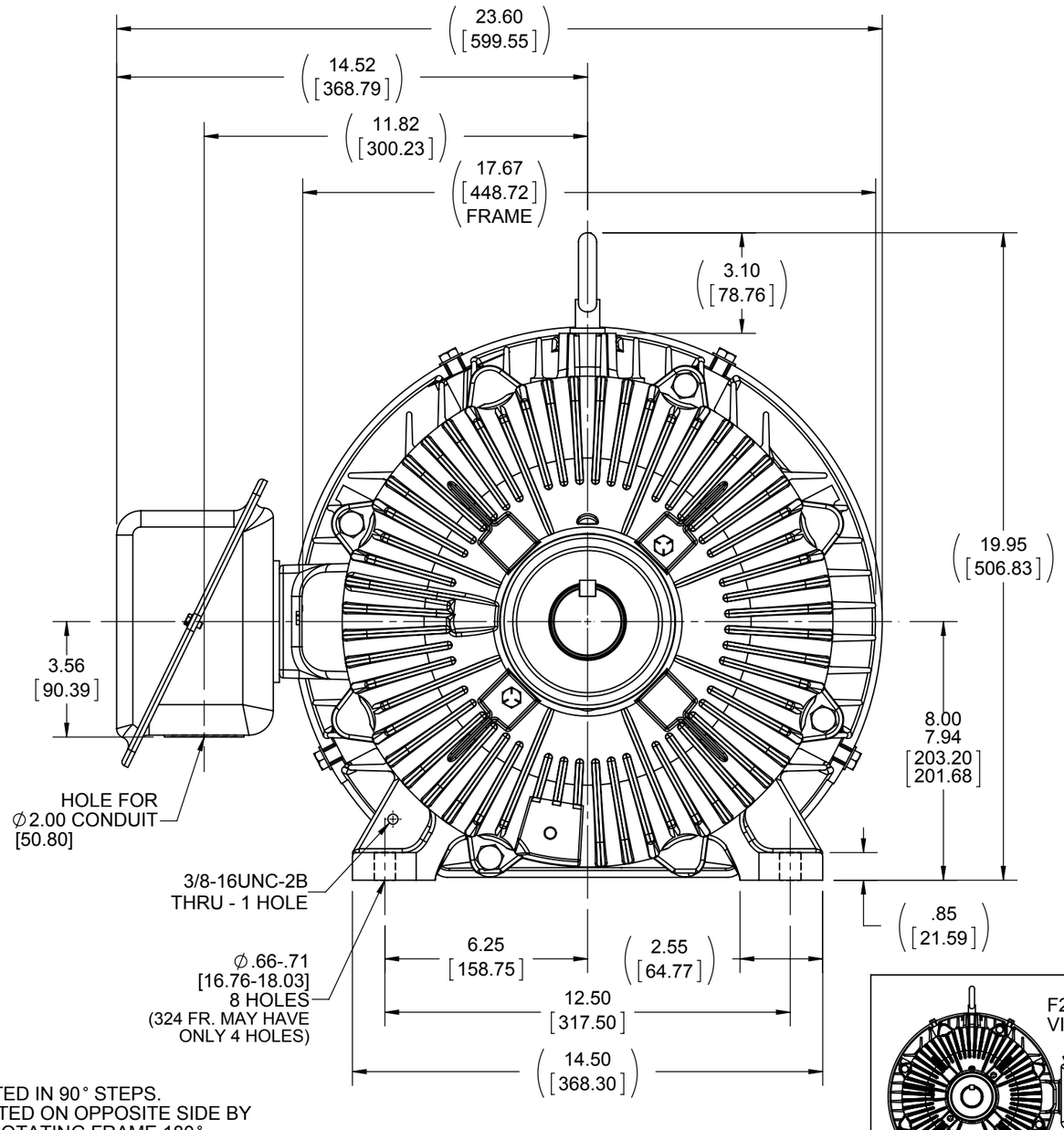
Nameplate Specifications

Phase	3	Output HP	20 & 15 Hp
Output KW	14.9 & 11.2 kW	Voltage	230/460 & 190/380 V
Speed	882 & 732 rpm	Service Factor	1.15 & 1.15
Frame	324T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	90.2 & 89.5 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	59/29.5 & 54/27 A	Power Factor	70
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	F
Drive End Bearing Size	6312	Opp Drive End Bearing Size	6311
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Induction Run	Starting Method	Across The Line
Poles	8	Rotation	Reversible
Resistance Main	.385 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	30.37 in
Frame Length	13.00 in	Shaft Diameter	2.125 in
Shaft Extension	5.25 in	Assembly/Box Mounting	F1/F2 CAPABLE
Connection Drawing	A-EE7308	Outline Drawing	B-SS28289-1300





NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND ROTATING FRAME 180°.
3. NAMEPLATE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	C	B	2F	2FF	BS
1150	324T	28.88 [733.48]	13.75 [349.25]	- - -	10.50 [266.70]	5.25 [133.35]
1300	324/326T	30.38 [771.58]	13.75 [349.25]	10.50 [266.70]	12.00 [304.80]	6.00 [152.40]
1450	326T	31.88 [809.68]	15.00 [381.00]	12.00 [304.80]	- - -	6.75 [171.45]

DRAWING REVISION	REVISION BY	DATE
W	MSG	10-28-2014
ECO	APPROVED BY	DATE
ECO-0063392	TB	10-28-2014

ECO DESCRIPTION
UPDATED TO NEW TITLE BLOCK

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]
CORNER FILLETS: .02 [.51]
MACHINED SURFACES: 200 INCH / 5.1 mm
mm SHOWN IN [BRACKETS]

DRAWN BY	
MLD	
DATE	
01-24-1996	
APPROVED BY	
ML	
DATE	
01-25-1996	
REFERENCE	

THIRD ANGLE PROJECTION

REGAL™ Regal Beloit America, Inc.

DESCRIPTION
OUTLINE
320T FR. - TEFC - CAST IRON - STEEL C'BOX

MATERIAL | PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
B	SS28289	1 OF 1

EE7308

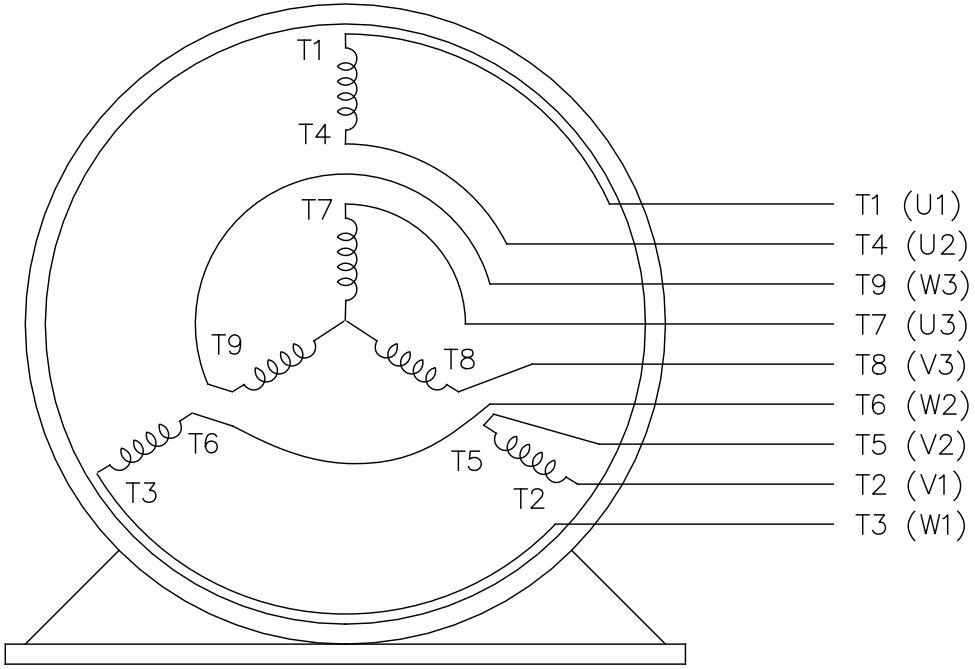
THREE PHASE
DUAL VOLTAGE MOTOR

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

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

REGAL™ 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

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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #:
CONN. DIAGRAM: A-EE7308
OUTLINE: B-SS28289-1300
WINDING: 324831 NONE 1
SPEED:

CUSTOMER P.O. #:
REFERENCE MODEL #: 324TTFS16105
CAT #: L416B
CUSTOMER PART #:
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	900	882	324T	TEFC	TFN	F	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#190/380	59/29.5&54/27	ACROSS THE LINE	CONT	F	1.15	40	3300

F.L. EFF	90.2	3/4 LD EFF	90.2	1/2 LD EFF	89.5	GTD EFF	ELECT. TYPE
F.L. PF	70.0	3/4 LD PF	64.0	1/2 LD PF	52.0	89.5	SQ CAGE IND RUN

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)	
119 LB-FT	130	150 LB-FT 126%	240 LB-FT 202%	70	

@ 3 FT.	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
55 dBA	64 dBA	8.5 LB-FT²	0 LB-FT²	20 SEC.	0	650 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6312	BALL 6311	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.256	0.192	1.704	1.406	16.117	0.150	ODE

*
NOTES
*

INVERTER TORQUE: NONE
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE PPR

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE HZ:

UL: V-INS, CONST UL REC

PREPARED BY: FAREEDA DUDEKULA
DATE: 9/11/2018

FORM: 3531 REV_4 2/27/06

Data Sheet

Date: 12/3/2018
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® electric

324TTFS16105

Submittal

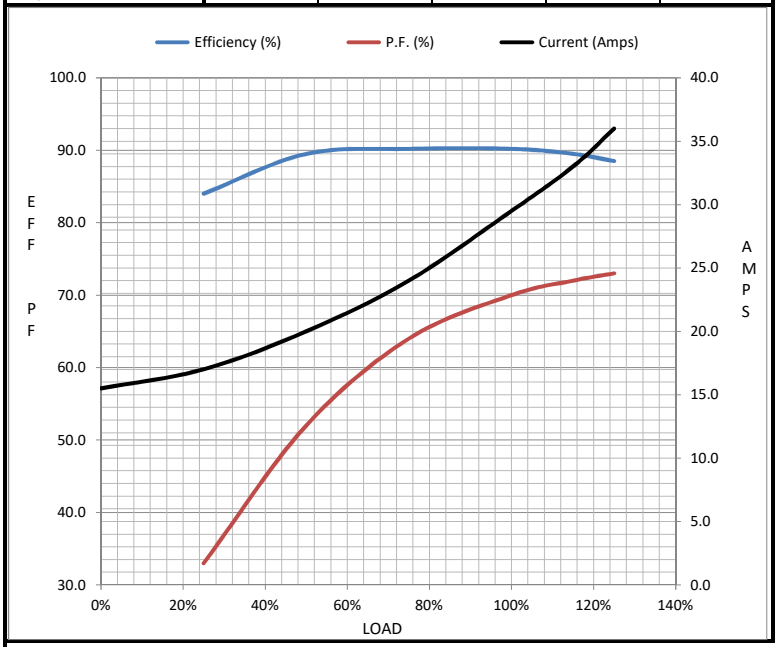
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	15.5	17.0	20.0	24.0	29.5	33.0	36.0	130	
Torque (ft-lb)	0.00	29.5	59.0	89.0	119	138	150	150	
RPM	900	895	892	888	882	880	875	0	
Efficiency (%)		84.0	89.5	90.2	90.2	89.5	88.5		
P.F. (%)	5.0	33.0	52.0	64.0	70.0	72.0	73.0	30.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	825	882	900
Current (Amps)	130	115	80.0	29.5	15.5
Torque (ft-lb)	150	130	240	119	0.00



Information Block

HP	20.0	
Sync. RPM	900	
Frame	324	
Enclosure	TEFC	
Construction	TFS	
Voltage	230/460#190/380	V
Frequency	60	Hz
Design	B	
LR Code letter	F	
Service Factor	1.15	
Temp Rise @ FL	70	° C
Duty	CONT	
Ambient	40	° C
Elevation	1,000	feet
Rotor/Shaft wk²	8.5	Lb-Ft²
Ref Wdg	324831 NONE	
Sound Pressure @ 1M	55	dBA
VFD Rating	NONE	
Outline Dwg	B-SS28289-1300	
Conn. Diag	A-EE7308	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.2560	0.1920	1.7040	1.4060	16.1170

Speed -Torque Curve