PRODUCT INFORMATION PACKET

Model No: 445THFN9106
Catalog No: W603
100 HP Severe Duty Motor, 3 phase, 900 RPM, 460 V, 445T Frame, TEFC
Severe Duty Motors

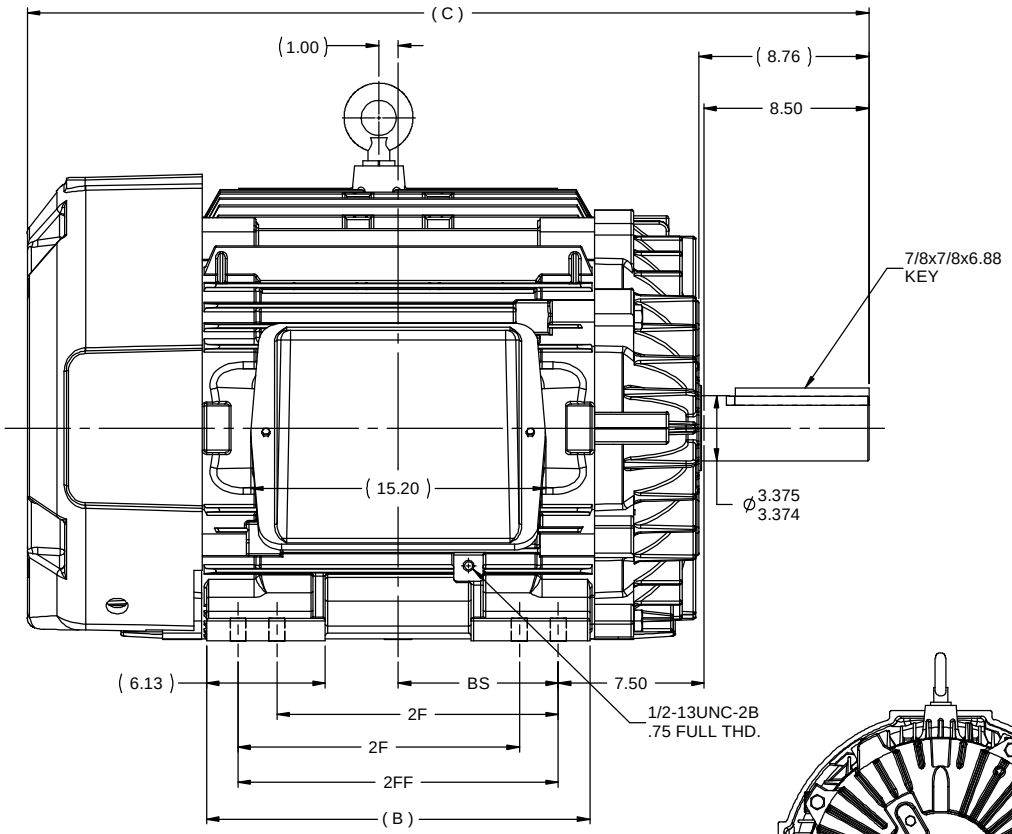
marathon® Motors

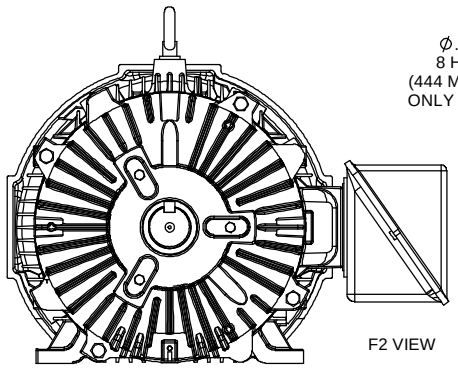
Nameplate Specifications

Output HP	100 Hp	Output KW	75.0 kW
Frequency	60 Hz	Voltage	460 V
Current	142.0 A	Speed	890 rpm
Service Factor	1.15	Phase	3
Efficiency	94.1 %	Power Factor	70
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	445T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6318	Opp Drive End Bearing Size	6316
UL	Recognized	CSA	Y
CE	Y	IP Code	56
Number of Speeds	1		

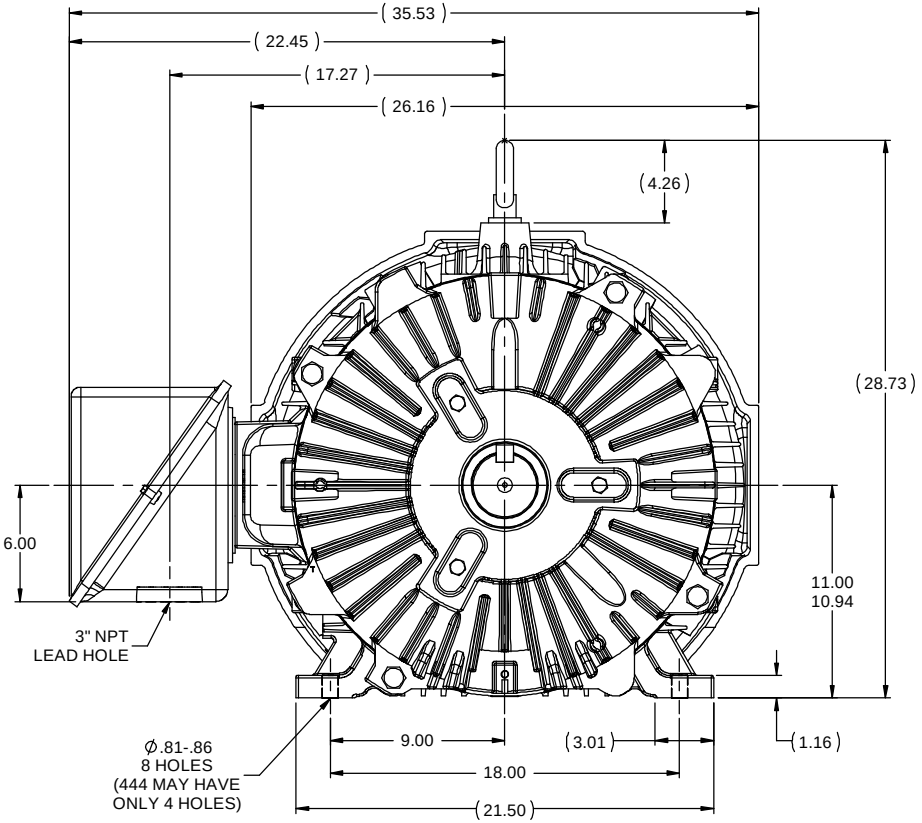
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	8	Rotation	Reversible
Resistance Main	.0325 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	43.35 in
Frame Length	20.25 in	Shaft Diameter	3.375 in
Shaft Extension	8.76 in	Assembly/Box Mounting	F1/F2 Capable
Inverter Load	CONSTANT 2:1		
Connection Drawing	A-EE7300	Outline Drawing	B-SS517026-2025





F2 VIEW



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

DASH	FRAME	B	C	BS	2F	2FF	
1825	444T	17.75	41.35	7.25	14.50	---	
2025	444/445T	19.75	43.35	8.25	14.50	16.50	

NO	REVISION	BY & DATE	CHK
9	UPDATED MOUNTING HOLE NOTE	HV 08-07-2012	EH
8	UPDATED FRAME TO CURRENT STD'S. ISAAC 09-5049	JJB 01-17-2012	
7	ADDED F2 VIEW	MSG 04-21-2010	MSG
6	REVISED FRAME AND DASH TABLE ISAAC09-5049	TJW 04-01-2010	EH
5	UPDATED DRAWING	RJW 04-18-2007	ML
4	CHG TO SHORT FAN GUARD DESIGN PER CN39335	RWR 02-17-2007	ML

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

THIRD ANGLE PROJECTION

MARATHON ELECTRIC

DRAWN	DRS 2/24/1999
CHK	ML 2/25/1999
APPR	JL 2/25/1999
SCALE	5:32
REF	
FMF	
PAGE	OF

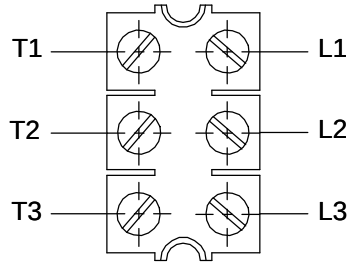
TITLE OUTLINE
444/445T FR. - TEFC - STD
MAT'L
FINISH
RFP
PREV
NETWORK FILE NAME SS517026

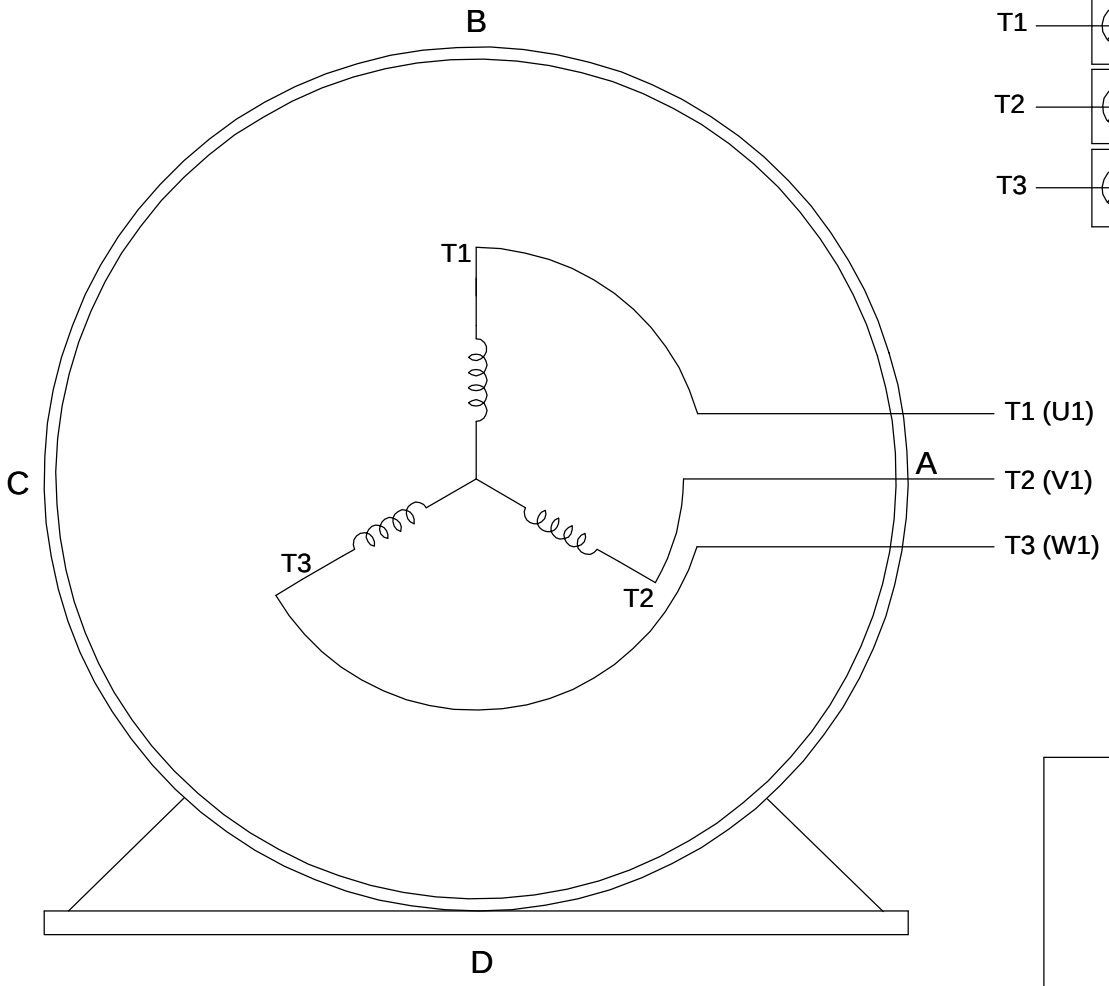
SIZE B | DRAWING NO SS517026 | REV 9

THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO
LINE LEAD CONNECTIONS.

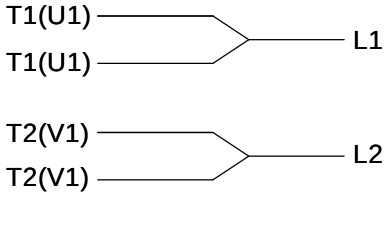
TERMINAL BLOCK WHEN SPECIFIED





VIEW OF TERMINAL END

IF MOTOR HAS
6 LEADS



A-9806 DECAL

OPTIONAL CORD
CONNECTION

L1	WHITE
L2	RED
L3	BLACK

DRAWING REVISION: AB	REVISION BY: JJB	DATE: 06-27-2017
ECO: ECO-0125361	APPROVED BY: TB	DATE: 06-27-2017
ECO DESCRIPTION: UPDATED TO CURRENT STANDARDS		

DRAWN BY: DA	REGAL™ Regal Beloit America, Inc.
DATE: 03-26-1993	
APPROVED BY: TB	DESCRIPTION: CONNECTION DIAGRAM EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR
DATE: 03-26-1993	
REFERENCE	MATERIAL / PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: A / DRAWING NUMBER: EE7300 / SHEET: 1 OF 1

CERTIFICATION DATA SHEET

Model#:	445THFN9106 BD	**WINDING#:**	T445833 NONE 8
CONN. DIAGRAM:	A-EE7300	**ASSEMBLY:**	F1/F2 CAPABLE
OUTLINE:	B-SS517026-2025		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	900	890	445T	TEFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	460	142	LINE OR INVERTER	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 94.1	3/4 LOAD EFF: 94.1	1/2 LOAD EFF: 93.6	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 70	3/4 LOAD PF: 67	1/2 LOAD PF: 57	93.6	SQ CAGE INV RATED	64.5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
590 LB-FT	725	745 LB-FT 126	1400 LB-FT 237	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
72 dBA	82 dBA	80 LB-FT^2	- LB-FT^2	20 SEC.	-	2350 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2 T2B	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6318	BALL 6316	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 2:1
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: 06/21/2017 05:06:21 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 6/20/2017
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon electric

445THFN9106

Submittal

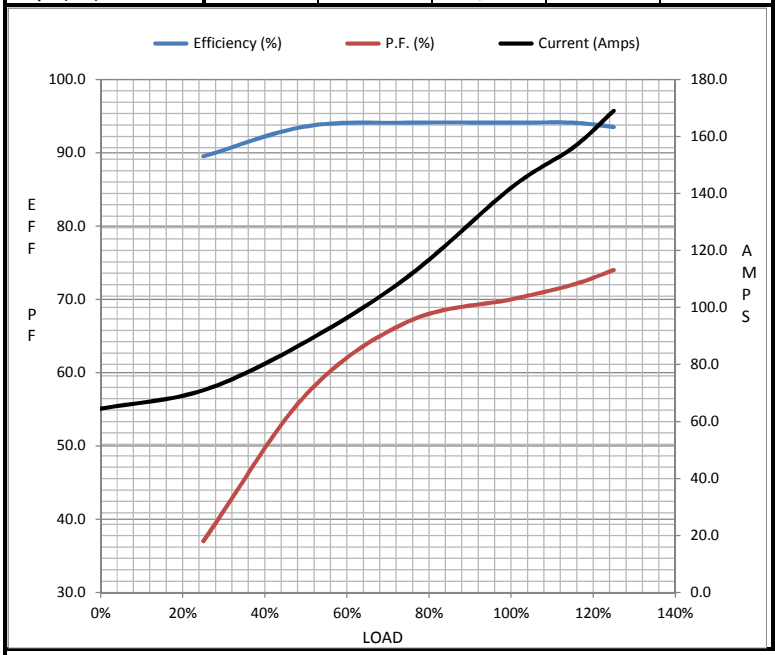
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	64.5	71.0	88.0	111	142	156	169	725	
Torque (ft-lb)	0.00	146	293	441	590	665	738	745	
RPM	900	898	895	892	890	888	886	0	
Efficiency (%)		89.5	93.6	94.1	94.1	94.1	93.5		
P.F. (%)	4.0	37.0	57.0	67.0	70.0	72.0	74.0	24.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	855	890	900
Current (Amps)	725	650	425	142	64.5
Torque (ft-lb)	745	725	1,400	590	0.00



Information Block

HP	100.0
Sync. RPM	900
Frame	445
Enclosure	TEFC
Construction	TFN
Voltage	460 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	60 ° C
Duty	CONT
Ambient	40 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	80.0 Lb-Ft²
Ref Wdg	T445833 NONE
Sound Pressure @ 1M	72 dBA
VFD Rating	CONSTANT 2:1
Outline Dwg	B-SS517026-2025
Conn. Diag	A-EE7300
Additional Specifications:	
0	
0	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0260	0.0210	0.2710	0.3490	3.8620