

# PRODUCT INFORMATION PACKET

**marathon**<sup>®</sup>  
Motors

Model No: 256TTFNA16574  
Catalog No: U872A  
20,1800,TEFC,256T,3/60/230/460  
Cooling Tower



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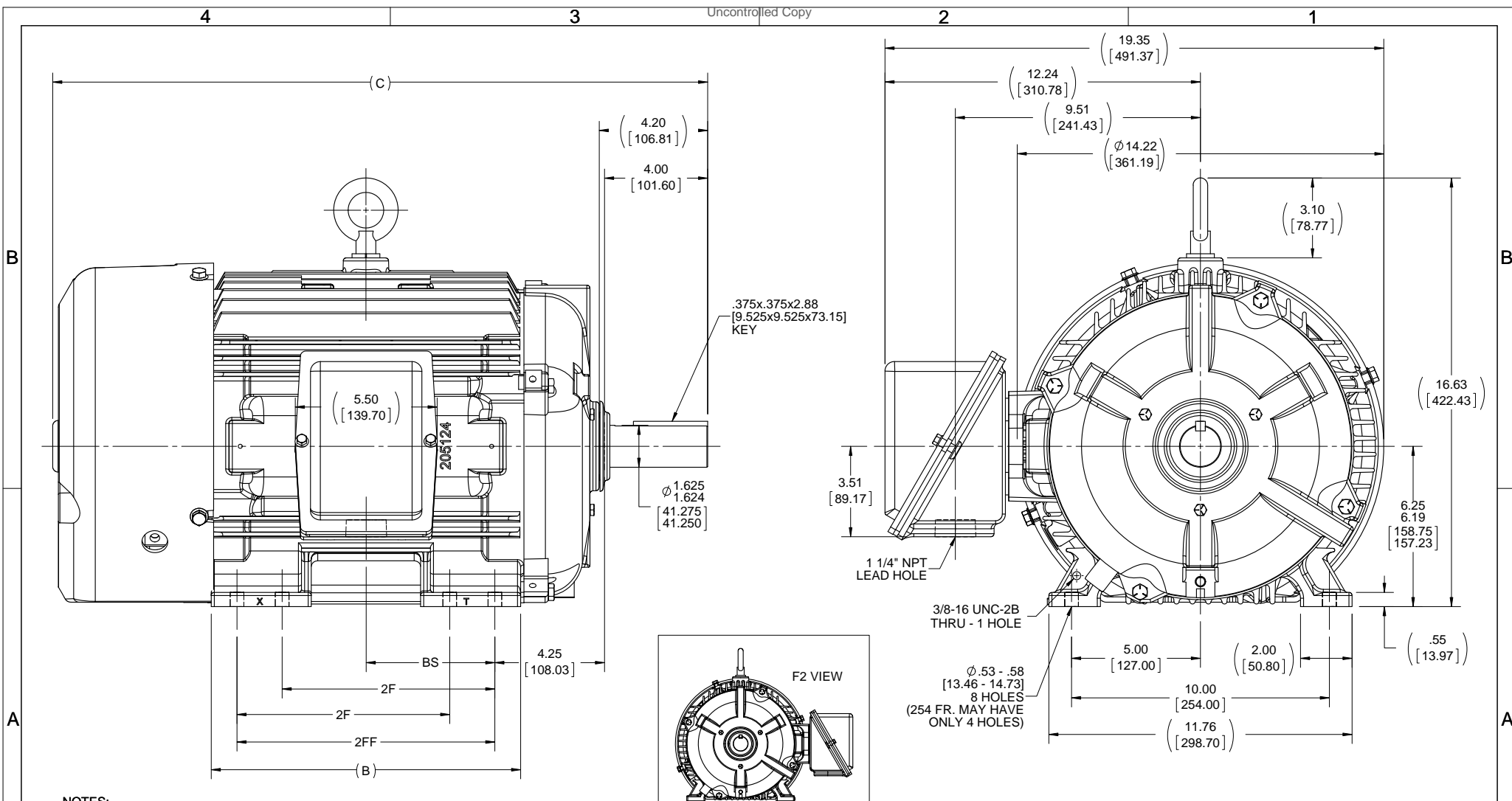
**Nameplate Specifications**

Output HP	<b>20 Hp</b>	Output KW	<b>14.9 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>48.0/24.1 A</b>	Speed	<b>1775 rpm</b>
Service Factor	<b>1.15</b>	Phase	<b>3</b>
Efficiency	<b>93 %</b>	Duty	<b>Continuous</b>
Insulation Class	<b>F</b>	Design Code	<b>B</b>
KVA Code	<b>G</b>	Frame	<b>256T</b>
Enclosure	<b>Totally Enclosed Fan Cooled</b>	Overload Protector	<b>No</b>
Ambient Temperature	<b>40 °C</b>	Drive End Bearing Size	<b>6309</b>
Opp Drive End Bearing Size	<b>6210</b>	UL	<b>Recognized</b>
CSA	<b>Y</b>	CE	<b>Y</b>
IP Code	<b>55</b>		

**Technical Specifications**

Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Mounting	<b>Rigid Base</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>Ball</b>	Opp Drive End Bearing	<b>Ball</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>T</b>
Overall Length	<b>25.40 in</b>	Frame Length	<b>12.25 in</b>
Shaft Diameter	<b>1.625 in</b>	Shaft Extension	<b>4.2 in</b>
Assembly/Box Mounting	<b>F1/F2 Capable</b>		
Outline Drawing	<b>B-SS203002-1225</b>	Connection Diagram	<b>A-EE7308</b>

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- NOTES:
- CONDUIT BOX CAN BE ROTATED ON ITS AXIS.
  - CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
  - NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

1050	254T	23.65 [600.71]	10.25 [260.35]	---	8.25 [209.55]	4.25 [107.95]
1225	254/256T	25.40 [645.16]	12.00 [304.80]	8.25 [209.55]	10.00 [254.00]	5.00 [127.00]
DASH	FRAME	C	B	2F	2FF	BS
		4			3	

DRAWING REVISION E	REVISION BY M GERTSCHEN	DATE 11-17-2016
ECO ECO-0112972	APPROVED BY T VUE	DATE 11-17-2016
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:		
DEC.	INCH	mm
.X	±0.1	[±2.5]
.XX	±0.03	[±0.76]
.XXX	±0.005	[±0.127]
.XXXX	±0.0005	[±0.0127]
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45°		
CORNER FILLETS: R.02 [51]		
MACHINED SURFACES: 200 $\sqrt{\text{INCH}}$ 5.1 $\sqrt{\text{mm}}$		
mm SHOWN IN [BRACKETS]		

DRAWN BY TVUE	DATE 12-18-2013
APPROVED BY TBROWN	DATE 12-18-2013
REFERENCE	THIRD ANGLE PROJECTION

Regal Beloit America, Inc.	
DESCRIPTION <b>OUTLINE</b> 250T FR. - TEFC - BB - STD.	
MATERIAL	PROCESS/FINISH
SIZE <b>B</b>	DRAWING NUMBER <b>SS203002</b>
	SHEET 1 OF 1

EE7308

THREE PHASE  
DUAL VOLTAGE MOTOR



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	ANG	TOLERANCES UNLESS SPECIFIED		FINISH	DRAWN RM 11/20/1990				
					DEC.	INCHES						
5	CHG TO REGAL LOGO	SL 09/10/2015	AB					CHK ML 11/21/1990				
4	REVISED IEC NOTATIONS	MSG 11/15/2011	CMN	.X	±.1			APPD SAS 04/24/2003				
3	ADDED IEC NOTATIONS... (U1), (V1) ETC. MU95194	MSG 5/10/2010	MJS	.XX	±.02		TITLE CONNECTION DIAGRAM	SCALE 1=1				
2	ADDED THE OPTIONAL CORD CONNECTION MU46318	RDH 04/24/2003	DRS	.XXX	±.005		3Ø - DUAL VOLTAGE MOTOR	REF				
1	REDRAWN	RM 11/20/1990		.XXXX	±.0005		MAT'L.	FMF				
					±7'30"			PREV				
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							DIST WP					



Regal Beloit America, Inc.

3Ø - DUAL VOLTAGE MOTOR

**CERTIFICATION DATA SHEET**

**Model#:** 256TTFNA16574 AA      **WINDING#:** K2564164 NONE 6  
**CONN. DIAGRAM:** A-EE7308      **ASSEMBLY:** F1/F2 CAPABLE  
**OUTLINE:** B-SS203002-1225

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20&15	14.9&11.2	1800	1775&1475	256T	TEFC	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#190/ 380	48/24.1&44/22	LINE OR INVERTER	CONTINUOU S	F3	1.15/1.15	40	3300

FULL LOAD EFF: 93&92.5	3/4 LOAD EFF: 93.6	1/2 LOAD EFF: 93	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 84&83.5	3/4 LOAD PF: 81	1/2 LOAD PF: 72	92.4	SQ CAGE INV RATED	17 / 8.5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
59.2 LB-FT	276 / 138	105 LB-FT 177	146 LB-FT 247	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
65 dBA	75 dBA	3.2 LB-FT^2	125 LB-FT^2	25 SEC.	2	400 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	NONE	FALSE	NONE	BLUE (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6309	6210						

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 10:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

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DATE: 06/23/2017 07:08:43 AM  
 FORM 3531 REV.3 02/07/99

\*\* Subject to change without notice.

Data Sheet

Date: 6/20/2017

256TTFNA16574

Customer:  
Attention:



Submitted by: FAREEDA DUDEKULA

Submital  
Data @ 460 V

Motor Load Data

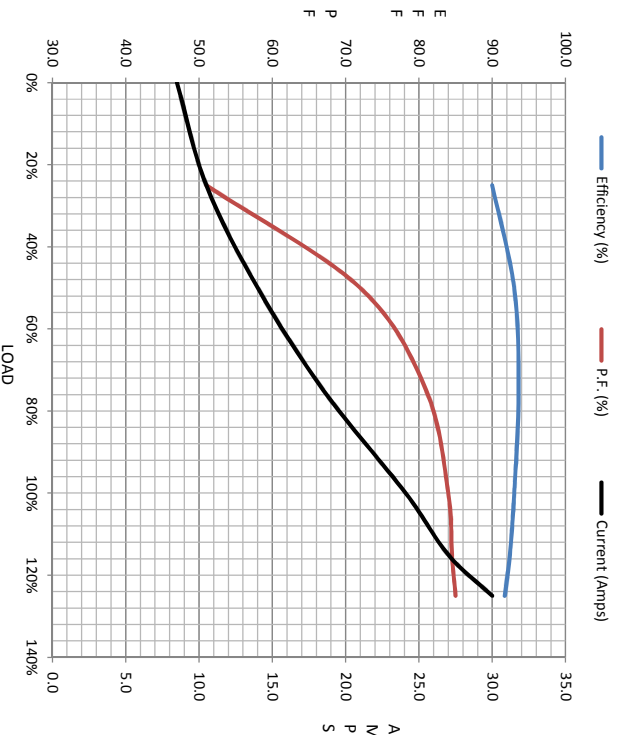
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	8.5	10.5	14.0	18.5	24.1	27.0	30.0	138
Torque (ft-lb)	0.00	14.5	29.5	44.5	59.2	68.0	74.5	105
RPM	1800	1795	1785	1780	1775	1,770	1760	0
Efficiency (%)		90.0	93.0	93.6	93.0	92.4	91.7	
P.F. (%)		8.5	51.0	72.0	81.0	84.5	85.0	40.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (rpm)	0	900	1625	1775	1800
Current (Amps)	138	115	86.0	24.1	8.5
Torque (ft-lb)	105	100	146	59.2	0.00

Information Block

HP	20.0
Sync. RPM	1800
Frame	256
Enclosure	TEFC
Construction	TEN
Voltage	30/460#190/38 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	65 °C
Duty	CONT
Ambient	40 °C
Elevation	1,000 feet
Rotor/Shaft wkt	3.2 Lb-Fe
Rel Wdg	K2564164 NONE
Sound Pressure @ 1M	65 dBA
VFD Rating	CONSTANT 10:1
Outline Dwg	B-SS203002-1225
Conn. Diag	A-EE7308
Additional Specifications:	
0	
0	
EQUIV CKT (OHMS / PHASE)	
R1	R2
0.2670	0.2070
X1	X2
0.9900	1.4910
Xm	Xm
	28.4000



Speed - Torque Curve

