

PRODUCT INFORMATION PACKET

Model No: 284THEN8032

Catalog No: Y985

Blue Max® Hazardous Duty® Explosion Proof Motor, 20 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM,
284TC Frame, EPNV



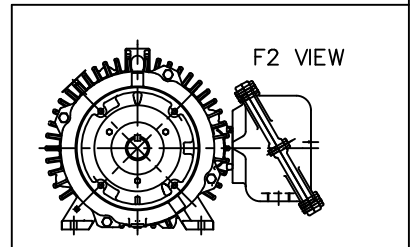
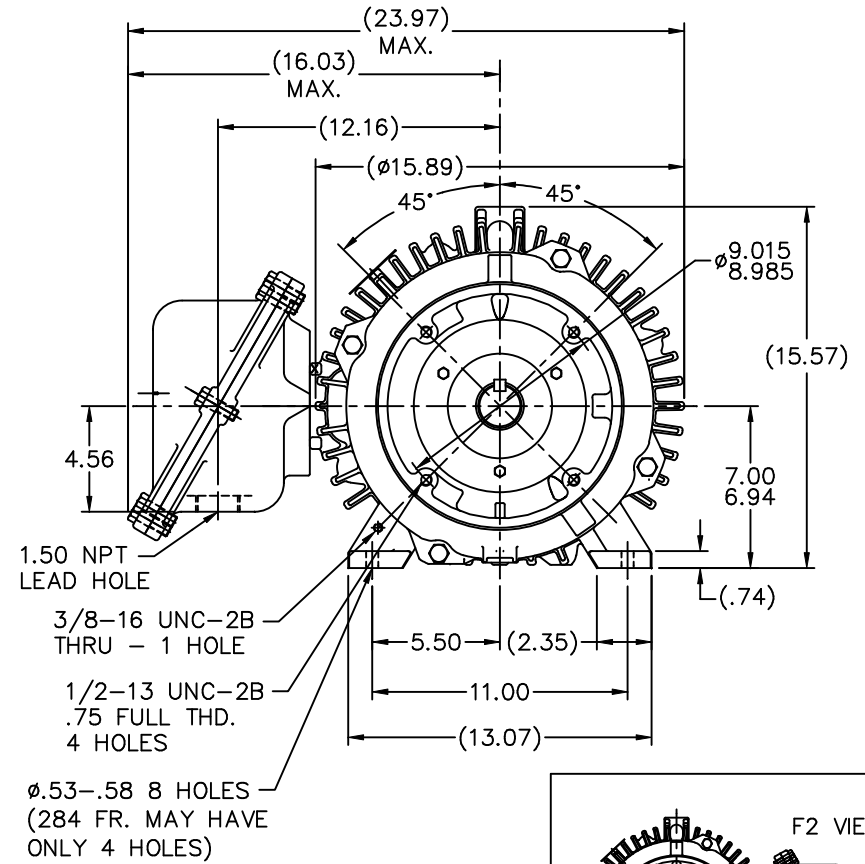
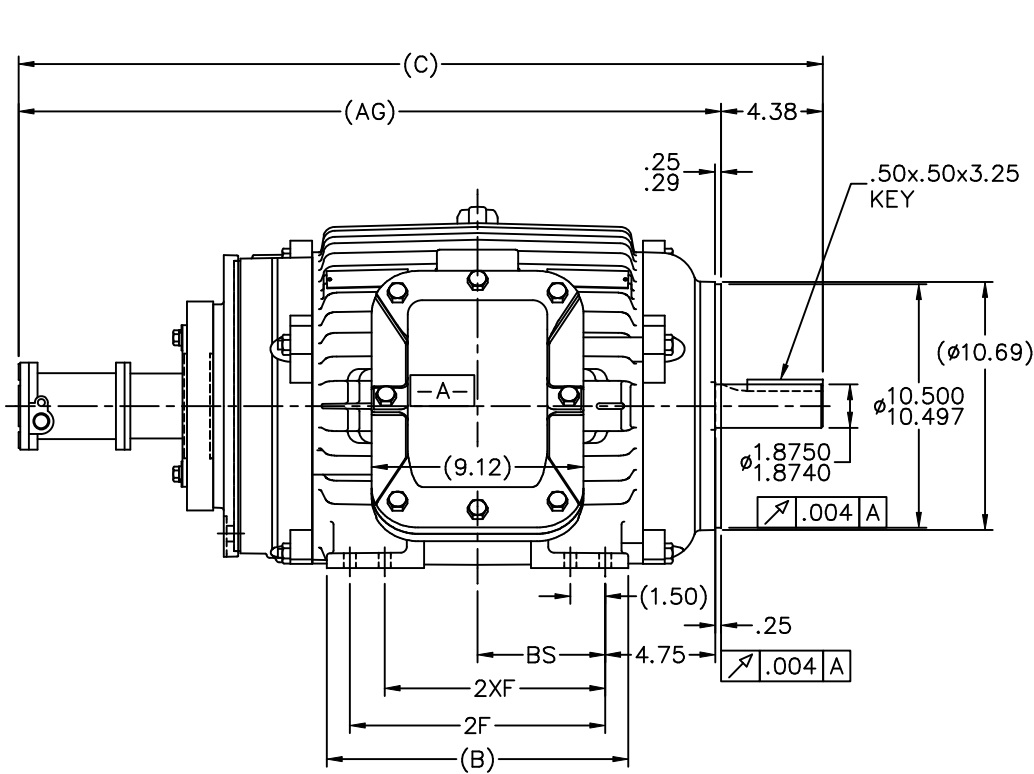
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Nameplate Specifications

Output HP	20 Hp	Output KW	14.9 kW
Frequency	60 Hz	Voltage	230/460 V
Current	53.0/26.5 A	Speed	1775 rpm
Service Factor	1	Phase	3
Efficiency	93.6 %	Power Factor	76
Duty	Continuous	Insulation Class	F
Design Code	INV	KVA Code	M
Frame	284TC	Enclosure	Explosion Proof Non Ventilated
Thermal Protection	Thermostat	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6311
UL	UL Listed And CSA Certified	CSA	Y
CE	N	IP Code	54
Hazardous Location	DIV 1 EXP PROOF CL I GR CD CL II GR FG T3C	Number of Speeds	1

Technical Specifications

Electrical Type	Squirrel Cage Inverter Duty	Starting Method	Inverter Only
Poles	4	Rotation	Reversible
Resistance Main	.2 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	33.16 in
Frame Length	12.75 in	Shaft Diameter	1.875 in
Shaft Extension	4.38 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 2000:1		
Outline Drawing	B-SS311179-1275	Connection Drawing	A-EE7308T



- NOTES:
 1. BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.
 2. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

1275	284TC	33.16	28.78	12.50	9.50	-	4.75
1425	284/86TC	34.66	30.28	13.00	11.00	9.50	5.50
DASH	FRAME	C	AG	B	2F	2XF	BS

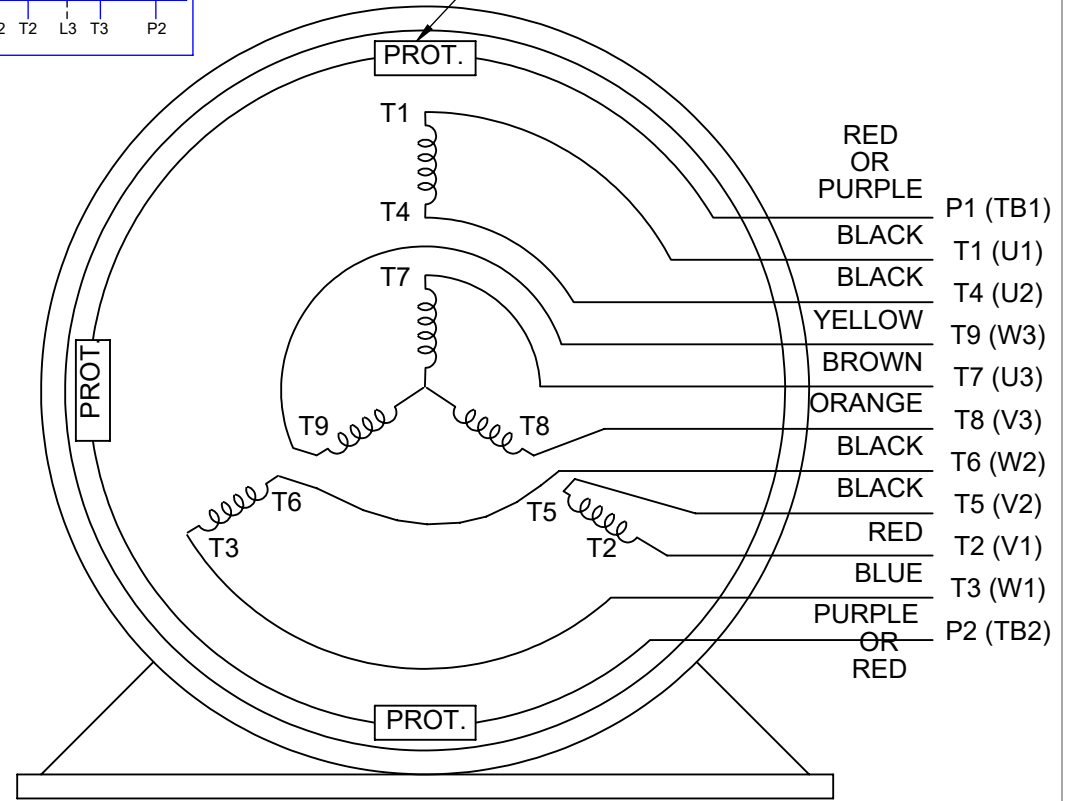
		TOLERANCES UNLESS SPECIFIED		MARATHON ELECTRIC		DRAWN DAH 06-01-2001	
		DEC.	INCHES			CHK	ML 06-05-2001
		.X	±.1			APPD	BW 06-05-2001
3	ADDED F2 VIEW MU76239	RJW	11-14-2006	ML	.XX	±.03	TITLE OUTLINE-EXP.PR.-TGN-BEI H38 ENCODER
2	REDRAWN IN AUTOCAD	TAT	06-24-2005	DRS	.XXX	±.005	280TC FR. - BB - STD. - 12.50 LAM.
1	NEW DRAWING MU36727	DAH	06-05-2001		.XXXX	±.0005	MATL
NO.	REVISION	BY & DATE	CHK	ANG	±7'30"	FINISH	PREV
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT						RFP	CAD FILE ss311179
						DIST	LB
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HIGH VOLTAGE



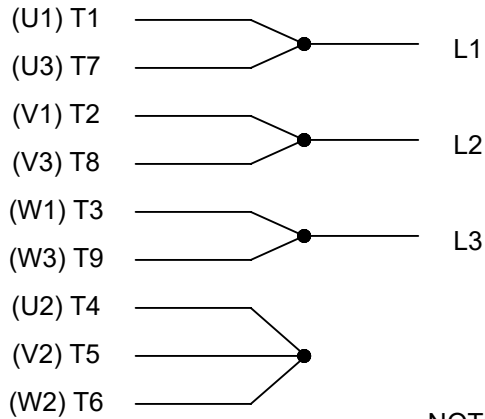
**THREE PHASE
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS
CONNECTED IN SERIES



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



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 3 PHASE - DUAL VOLTAGE MOTOR
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			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T

CERTIFICATION DATA SHEET

Model#: 284THEN8032 BA WINDING#: K2844139 R1 1
 CONN. DIAGRAM: A-EE7308T ASSEMBLY: F1 ONLY
 OUTLINE: B-SS311179-1275

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20	14.9	1800	1775	284TC	EPNV	M	INV

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	53/26.5	INVERTER ONLY	CONTINUOUS	F3	1.0	40	3300

FULL LOAD EFF: 93.6	3/4 LOAD EFF: 93.6	1/2 LOAD EFF: 92.5	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 76	3/4 LOAD PF: 68	1/2 LOAD PF: 55	92.4	SQ CAGE INV DUTY	28 / 14

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
59.2 LB-FT	560 / 280	135 LB-FT 228	275 LB-FT 465	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
62 dBA	72 dBA	4.4 LB-FT^2	- LB-FT^2	- SEC.	-	475 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0.1562	0.1562	0.7242	0.73414	13.774

RM	ZREF	XR	TD	TD0
1391.6	14.2	5.6	0.012	0.24

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	FALSE	EXP PROOF CL I GR C&D CL II GR F&G T3C	FALSE	NONE	BLUE (ENAMEL)

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
6311	6311						

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

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 2000:1
INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: REGAL SUPPLIED - REGAL MOUNT BEI H38
NPS HOLE 1024 PPR
BRAKE: NONE NONE

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

DATE: 06/21/2017 10:10:33 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 29-06-2017
Customer: _____
Attention: _____
Submitted by: FAREEDA DUDEKULA



284THEN8032

Submittal

Data @ **460 V**

Motor Load Data

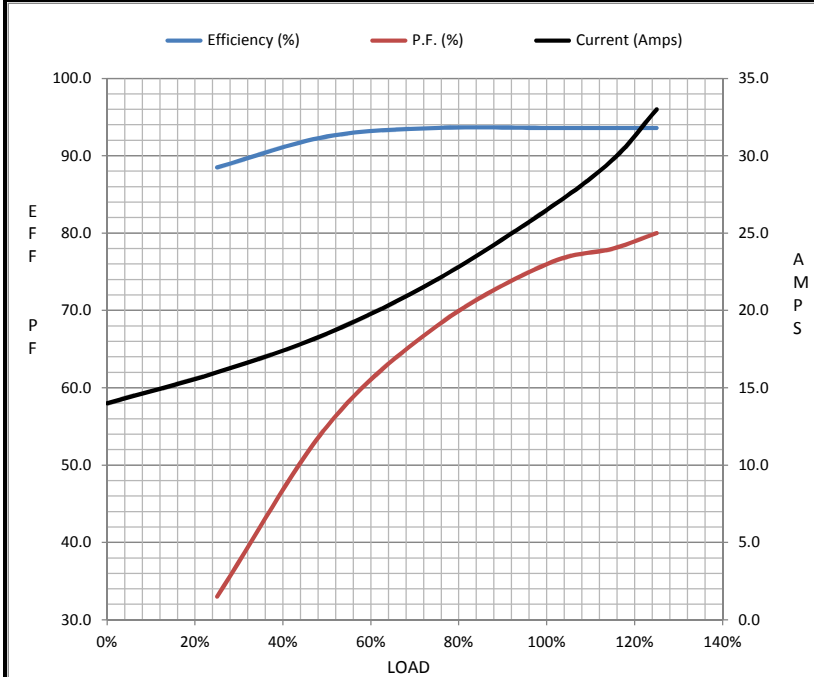
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	14.0	16.0	18.5	22.0	26.5	29.8	33.0	280
Torque (ft-lb)	0.00	14.8	29.5	44.2	59.2	66.7	74.2	135
RPM	1800	1795	1788	1782	1775	1,773	1770	0
Efficiency (%)		88.5	92.5	93.6	93.6	93.6	93.6	
P.F. (%)	3.0	33.0	55.0	68.0	76.0	78.0	80.0	26.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1485	1775	1800
Current (Amps)	280	250	175	26.5	14.0
Torque (ft-lb)	135	125	275	59.2	0.00

Information Block

HP	20.0			
Sync. RPM	1800			
Frame	284			
Enclosure	TENV			
Construction	TTN			
Voltage	230/460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	M			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	4.4 Lb-Ft ²			
Ref Wdg	K2844139 R1			
Sound Pressure @ 1M	62 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	B-SS311179-1275			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.1560	0.1560	0.7240	0.7340	13.7740



Speed - Torque Curve

