

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: 056H17T5302

Catalog No: Y535

Black Max® Inverter Duty Speed Ratio Motor, 1 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 56C Frame, TENV



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RegalRexnord


Nameplate Specifications

Phase	3	Output HP	1 Hp
Output KW	0.75 kW	Voltage	230/460 V
Speed	1725 rpm	Service Factor	1.0
Frame	56C	Enclosure	Totally Enclosed Non Ventilated
Thermal Protection	Thermostat	Efficiency	84 %
Ambient Temperature	40 °C	Frequency	60 Hz
Current	3.0/1.5 A	Power Factor	75
Duty	Continuous	Insulation Class	F
Design Code	INV	KVA Code	P
Drive End Bearing Size	6203	Opp Drive End Bearing Size	6203
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Duty	Starting Method	Inverter Only
Poles	4	Rotation	Reversible
Resistance Main	13.5 Ohms	Mounting	Bolt-on Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Rolled Steel
Shaft Type	NEMA 56	Overall Length	14.98 in
Frame Length	8.56 in	Shaft Diameter	0.625 in
Shaft Extension	2.06 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 1000:1		
Outline Drawing	B-108747-856	Connection Drawing	A-EE7308T



- | | | |
|---|--|---|
|  Regal Beloit America, Inc. | | |
| DESCRIPTION
<div style="text-align: center;"> <h1>OUTLINE</h1> <p>56 FR.-TENV-BB-DBL."C" FACE</p> </div> | | |
| MATERIAL | | PROCESS/FINISH |
| SIZE
<div style="font-size: 2em; font-weight: bold;">B</div> | DRAWING NUMBER
<div style="font-size: 2em; font-weight: bold;">108747</div> | SHEET
<div style="font-size: 1.5em; font-weight: bold;">1 OF 1</div> |

1

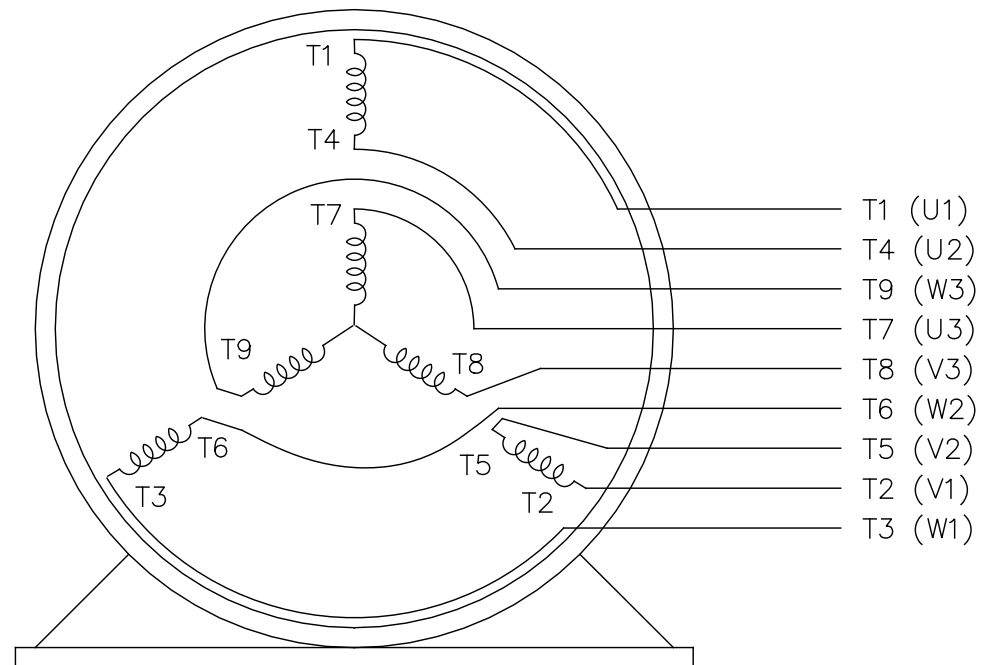
HIGH VOLTAGE

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

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 _____

DRAWING REVISION	REVISION BY	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY:			
ECO	APPROVED BY	DATE	DEC. mm INCH ANGLE .X ±2.5 ±0.11 ±0.5° .XX ±0.51 ±0.021 .XXX ±0.127 ±0.0051 .XXXX ±0.0127 ±0.00051	AS DATE: 02/20/2017			
ECO DESCRIPTION NEW DRAWING			REMOVE BURRS & BREAK SHARP EDGES .08/.38 [.003/.015]X 45° CORNER FILLETS R.51 [.02] MACHINED SURFACES INCH 125 mm 3.2	APPROVED BY: ST DATE: 02/20/2017	DESCRIPTION CONNECTION DIAGRA 3 PHASE - UAL VOLTAGE		
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			INCH SHOWN IN [BRACKETS]	THIRD ANGLE PROJECTION	SIZE DWG NO A EE7308TP	PROCESS/FINISH	SHEET 1

CERTIFICATION DATA SHEET

Model#: 56H17T5302 E
 CONN. DIAGRAM: A-EE7308T
 OUTLINE: A-104043-856

WINDING#: ZT472 TR 3
 ASSEMBLY: F1 ONLY

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
1	.75	1800	1725	56C	TENV	P	INV

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	3/1.5	INVERTER ONLY	CONTINUOUS	F3	1.0	40	3300

FULL LOAD EFF: 84	3/4 LOAD EFF: 82.5	1/2 LOAD EFF: 78.5	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 75	3/4 LOAD PF: 65.5	1/2 LOAD PF: 51	81.5	SQ CAGE INV DUTY	2 / 1

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
3 LB-FT	30 / 15	10.8 LB-FT 360	15 LB-FT 500	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
62 dBA	72 dBA	0.11 LB-FT^2	0 LB-FT^2	0 SEC.	0	39 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
8.378	5.6232	10.7068	9.9116	278.036

RM	ZREF	XR	TD	TD0
11132.8	284	1.7	0.0071	0.136

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	BRAKE OR ENCODER	BOLT-ON	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLACK (POWDER)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL						
6203	6203	POLYREX EM	STANDARD 56	NONE	NONE	1144 STRESSPROOF (C-223)	ROLLED STEEL

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 1000:1
 INV. HP SPEED RANGE: 2.0 X BASE SPEED

ENCODER: PROVISIONS ONLY
 NORTHSTAR ST56
 NONE NONE PPR

BRAKE: PROVISIONS ONLY NONE

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STEARNS	P/N	NONE
56,000	NONE	
10 FT-LB	NONE V	NONE Hz

DATE: 06/28/2017 02:08:32 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 8/22/2017

Customer:

Attention:

Submitted by: VINAYAK YERATE



56H17T5302

Submittal

Data @ 460 V

Motor Load Data

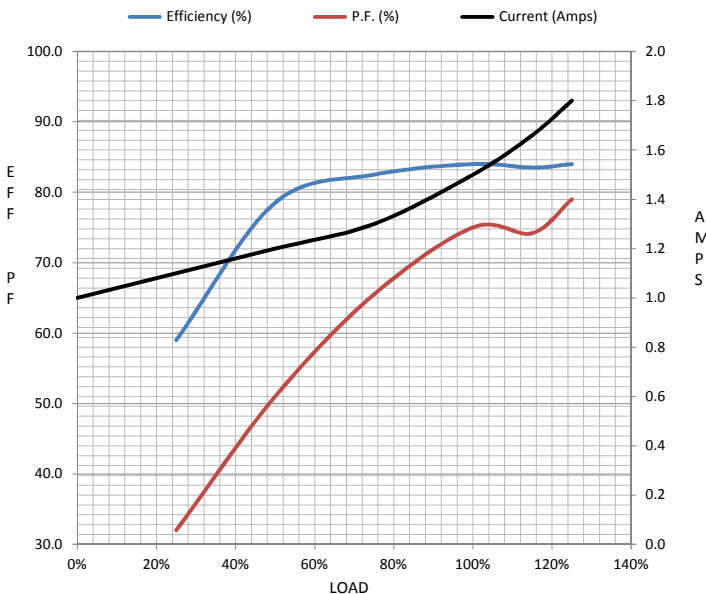
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.00	1.10	1.20	1.30	1.50	1.66	1.80	15.0	
Torque (ft-lb)	0.00	0.75	1.50	2.20	3.0	3.4	3.7	10.8	
RPM	1800	1788	1778	1765	1750	1,747	1740	0	
Efficiency (%)		59.0	78.5	82.5	84.0	83.5	84.0		
P.F. (%)	12.0	32.0	51.0	65.5	75.0	74.2	79.0	69.0	

Motor Speed Data

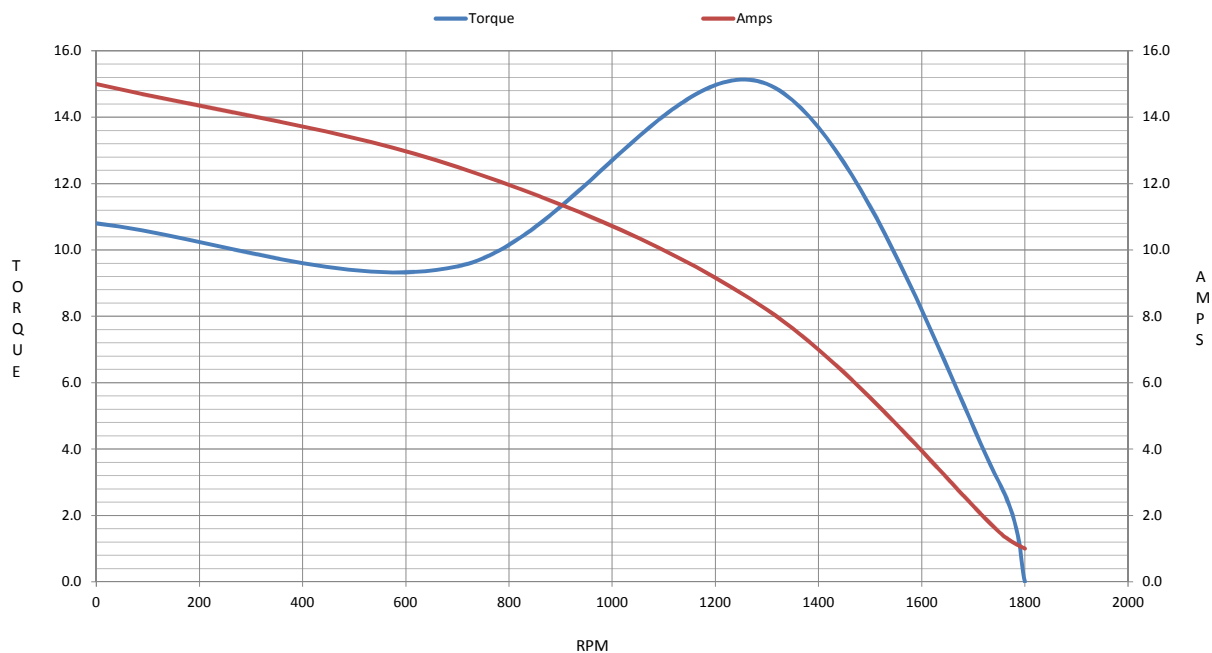
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	700	1300	1750	1800
Current (Amps)	15.0	12.5	8.2	1.50	1.00
Torque (ft-lb)	10.8	9.5	15.0	3.0	0.00

Information Block

HP	1.0			
Sync. RPM	1800			
Frame	56			
Enclosure	TENV			
Construction	TTR			
Voltage	230/460	V		
Frequency	60	Hz		
Design	A			
LR Code letter	P			
Service Factor	1.15			
Temp Rise @ FL	65	° C		
Duty	CONT			
Ambient	40	° C		
Elevation	1,000	feet		
Rotor/Shaft wk²	0.11	Lb-Ft²		
Ref Wdg	ZT472 TR			
Sound Pressure @ 1M	62	dBA		
VFD Rating	CONSTANT 1000:1			
Outline Dwg	A-104043-856			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
8.3780	5.6230	10.7070	9.9120	278.0360



Speed -Torque Curve



EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 056H17T5302

(Model No. may contain prefix and/or suffix characters)

Catalog No : Y535

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22