

**BALDOR • RELIANCE**

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# Customer information packet

## VEM3581T

1HP, 1760RPM, 3PH, 60HZ, 143TC, 0520M, TEFC, F1

Class - None

Division - Not Applicable

## Specifications

Enclosure	TEFC
Frame	143TC
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	1.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA EEV NEMA PREMIUM NEMA_PREMIUM UR
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	3.260 A @ 230.0 V 3.200 A @ 208.0 V 1.630 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	85.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None

## Part detail

Revision	E
Type	AC
Mech. spec.	05C053
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYC053
Eff. date	04-29-2024
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	09-29-2021

Heater Indicator	No Heater
High Voltage Full Load Amps	1.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	13.03 IN
Power Factor	67
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1760 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

**Nameplate**

**NP3441LUA**

<b>CAT.NO.</b>	VEM3581T						
<b>SPEC</b>	05C053X508G1						
<b>HP</b>	1						
<b>VOLTS</b>	230/460						
<b>AMPS</b>	3.26/1.63						
<b>RPM</b>	1760						
<b>FRAME</b>	143TC		<b>HZ</b>	60		<b>PH</b>	3
<b>SF</b>	1.15	<b>CODE</b>	N	<b>DES</b>	B	<b>CLASS</b>	F
<b>NEMA NOM. EFF</b>	85.5	<b>PF</b>	67				
<b>RATING</b>	40C AMB-CONT						
<b>CC</b>	010A						
<b>ENCL</b>	TEFC	<b>SER</b>					
<b>DE</b>	6205	<b>ODE</b>	6203				
<b>VPWM INVERTER READY</b>	SFA 3.52/1.76						
<b>CT6-60H(10:1)VT3-60H(20:1)</b>	50HZ 1HP 190/380V 3.6/1.8A						SF1.0

**AC Induction Motor Performance Data**

Record # 82131

Typical performance - not guaranteed values

Winding: 05WGX508-R001		Type: 0520M	Enclosure: TEFC	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>	
Rated Output (HP)	1	Full Load Torque	2.979 LB-FT	
Volts	230/460	Start Configuration	direct on line	
Full Load Amps	3.2-3.2/1.6	Breakdown Torque	13.9 LB-FT	
R.P.M.	1760	Pull-up Torque	8 LB-FT	
Hz	60 Phase	Locked-rotor Torque	9.18 LB-FT	
NEMA Design Code	B KVA Code	Starting Current	14.4 A	
Service Factor (S.F.)	1.15	No-load Current	1.11 A	
NEMA Nom. Eff.	0 Power Factor	Line-line Res. @ 25°C	16.215 Ω	
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	24°C	
S.F. Amps		Temp. Rise @ S.F. Load	28°C	
		Locked-rotor Power Factor	62	

**Load Characteristics 460 V, 60 Hz, 1 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	29	46	59	68	74	79	72
Efficiency	71.2	81.4	84.6	85.5	85.4	84.7	85.4
Speed	1791.4	1784.2	1776.7	1768.6	1760	1750.7	1763
Line amperes	1.14	1.25	1.41	1.61	1.84	2.11	1.75

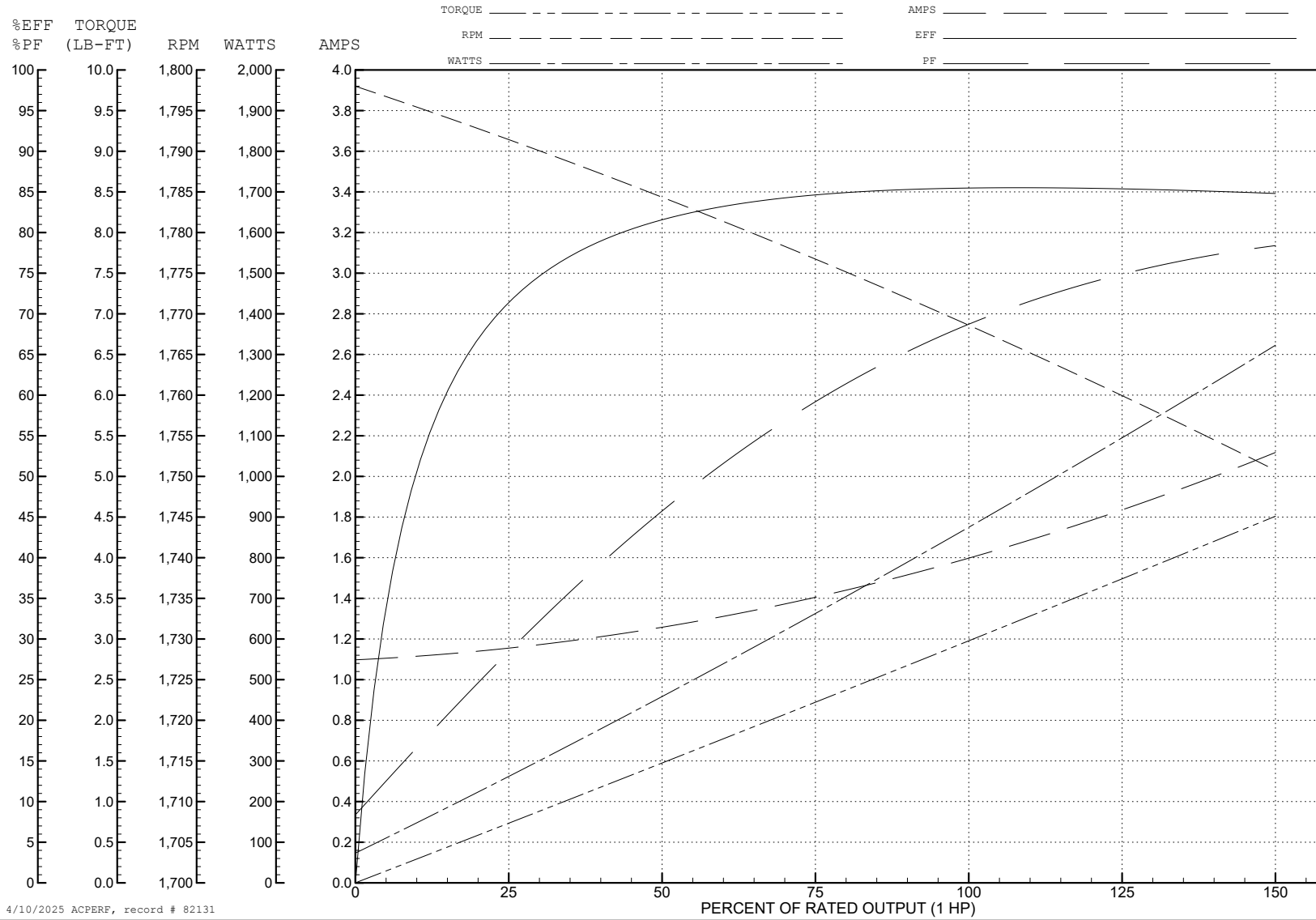
ABB Motors and Mechanical Inc.

WINDING # 05WGX508

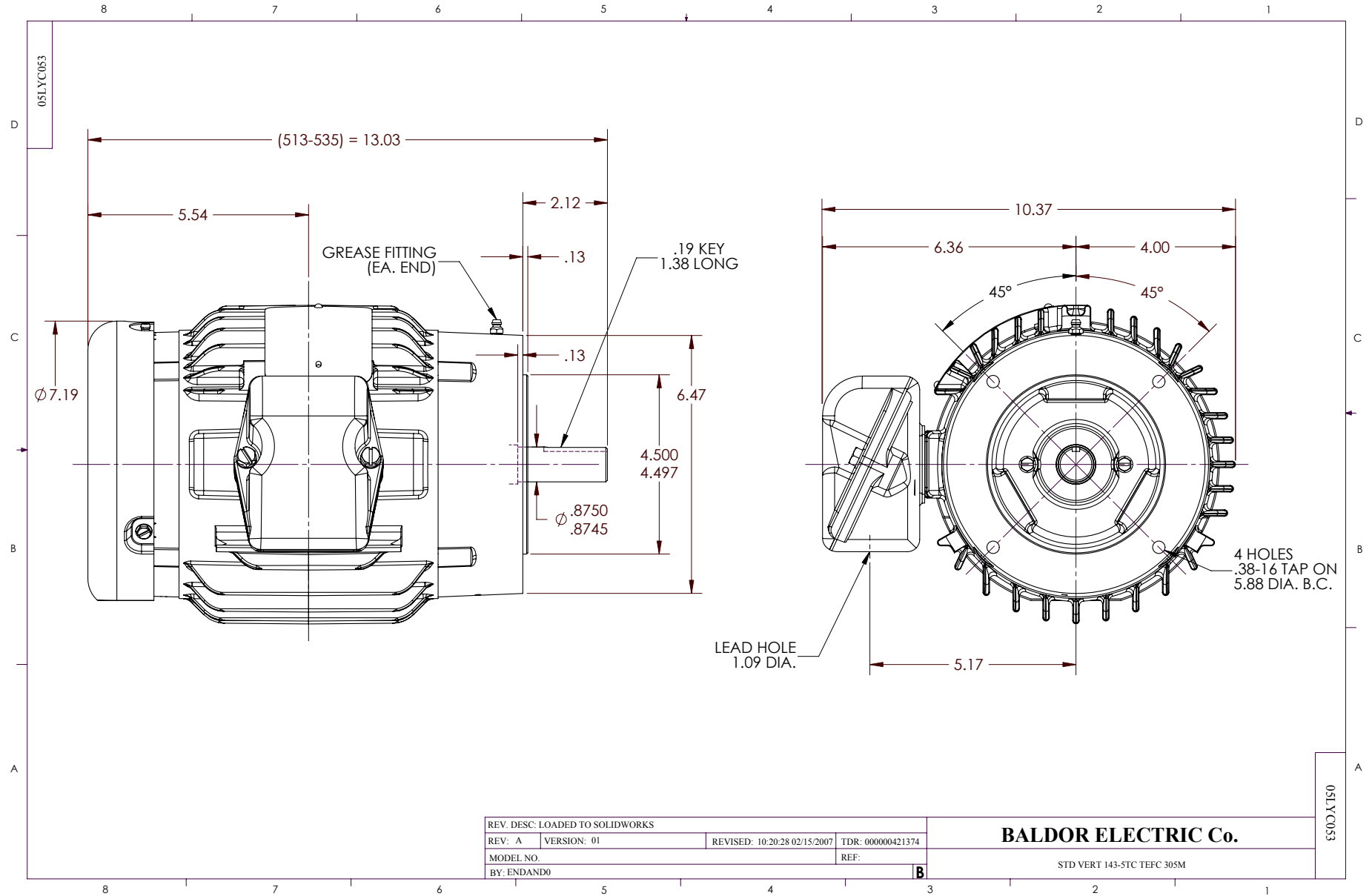
Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1760 RPM 460 V 0520M

TORQUES (LB-FT): PO=13.9 PU=8 LR=9.18 LRA=14.4



4/10/2025 ACPERF, record # 82131



CD0005



LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS