

ABB BALDOR RELIANCE III

Customer information packet

EM7090T-I-5

100HP, 1780RPM, 3PH, 60HZ, 405T, A40072M, TEFC

Class - CLI GP C,D

Division - Division I

Specifications

Enclosure	TEFC
Frame	405T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Division I
Motor Letter Type	Three Phase
Output @ Frequency	100.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CCSA US CSA CSA EEV UL
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	89.600 A @ 575.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	95.4 %
Feedback Device	NO FEEDBACK
Haz Area Temp Code	T3C
Heater Indicator	No Heater
High Voltage Full Load Amps	89.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	G
Lifting Lugs	Standard Lifting Lugs

Part Detail

Revision	E
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	A40WG0496
Layout	617433-513
Eff. date	04-13-2017
CD Diagram	416820-036
Poles	04
Leads	3#2
Proprietary	False
Created date	04-24-2015

Motor Lead Quantity/Wire Size	3 @ 2 AWG
Motor Standards	NEMA
Motor Type	A40072M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	38.23 IN
Power Factor	88
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1780 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

NP2496L	
MOBIL POLYREX EM	

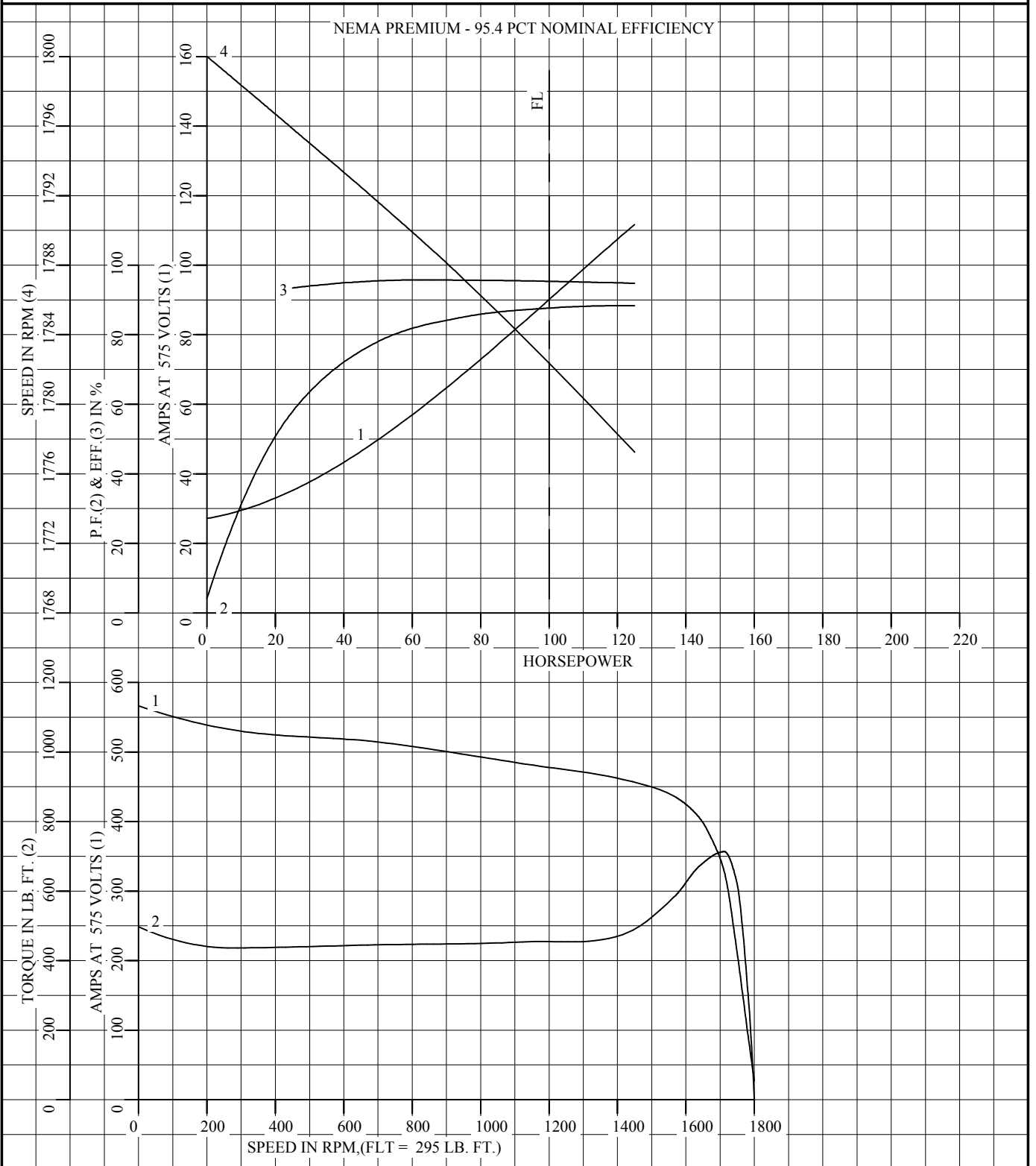
000613006PC		
CLASS I GROUP	C D X	NO.
CLASS II GROUP	X X X	
OPERATING TEMP CODE	T3C	

NP2293L

CAT.NO.	EM7090T-I-5			SPEC NO.		A40-6593-0496			FRAME	405T
HP	100	PHASE	3	DESIGN	B	TYPE	P			
RPM	1780	HZ	60	AMB	40	SF	1.15			
VOLTS	575		DUTY	CONT		INSUL.CLASS		F		
AMPS	89.6			ENCL	TEFC	CODE	G			
DRIVE END BEARING	80BC03J30X		NEMA-NOM-EFFICIENCY			95.4				
OPP D.E. BEARING	80BC03J30X									
SER.NO.			SUITABLE FOR 55C AMB @ 1.0 SF							
	NEMA MG-1 PT 5, IP55						MOTOR WEIGHT			

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	405T	100	P	3/60	1780	575
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
89.6	CONT	40/F	1.15	B	G	FCXE
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
-	418142037AE	---	---	.0882		
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	27.4	1800	4.25	0	
1/4	25.0	34.6	1796	58.0	93.5	
2/4	50.0	50.3	1792	78.0	95.5	
3/4	74.9	69.0	1787	85.1	95.7	
4/4	100	89.6	1782	87.7	95.4	
5/4	125	112	1777	88.3	94.8	
SPEED TORQUE						
		RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES	
LOCKED ROTOR		0	169	498	566	
PULL UP		270	148	437	532	
BREAKDOWN		1712	242	714	328	
FULL LOAD		1782	100	295	89.6	
AMPERES SHOWN FOR 575. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE						
REMARKS: CALCULATED DATA NEMA PREMIUM - 95.4 PCT NOMINAL EFFICIENCY						
		DR. BY J.P.TSAO		A-C MOTOR PERFORMANCE DATA A40WG0496-R001 ISSUE DATE 10/28/14		
		CK. BY E.CHRISTIAN				
		APP. BY E.CHRISTIAN				
		DATE 10/28/14				

REL S.O.	RPM 1780	S.F. 1.15	ROTOR 418142037AE
FRAME 405T	VOLTS 575	NEMA DESIGN B	TEST S.O. CALCULATED DATA
HP 100	AMPS 89.6	CODE LETTER G	TEST DATE ---
TYPE P	DUTY CONT	ENCLOSURE FCXE	STATOR RES. @ 25 °C .0882
PHASE/HERTZ 3/60	AMB °C/INSUL 40/F	E/S -	OHMS (BETWEEN LINES)



AMPERES SHOWN FOR 575 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

BALDOR
A MEMBER OF THE ABB GROUP

DR. BY	J.P.TSAO
CK. BY	E.CHRISTIAN
APP. BY	E.CHRISTIAN
DATE	10/28/14

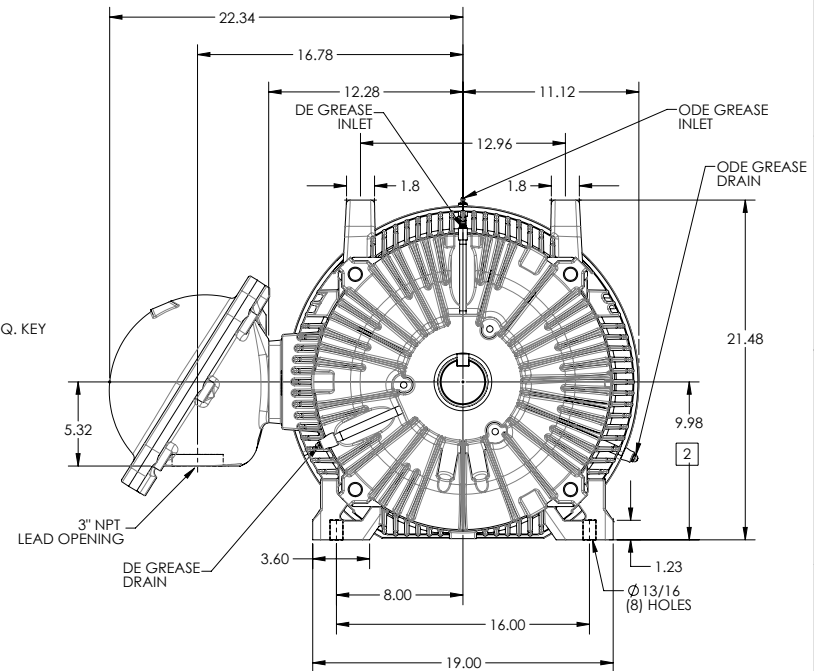
**A-C MOTOR
PERFORMANCE
CURVES**

A40WG0496-R001

ISSUE DATE 10/28/14

SQUIRREL-CAGE INDUCTION

XT/ECP SEVERE DUTY ENCLOSURE



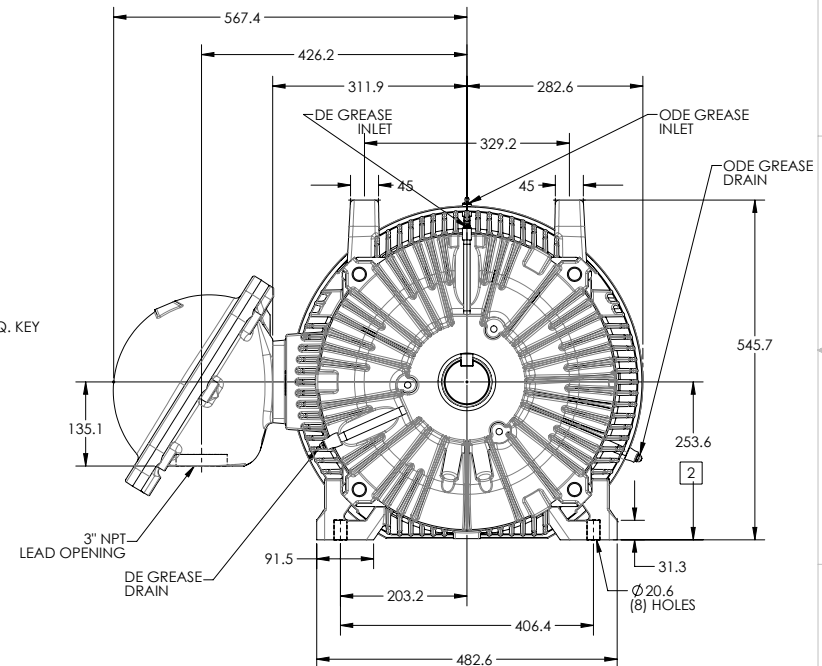
- 4 WEIGHT (LBS): 1400

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

G405T/404T XP TEFC FOOT DRILL RIG DUTY,16CB1001A01 BOX

SQUIRREL-CAGE INDUCTION

XT/ECP SEVERE DUTY ENCLOSURE



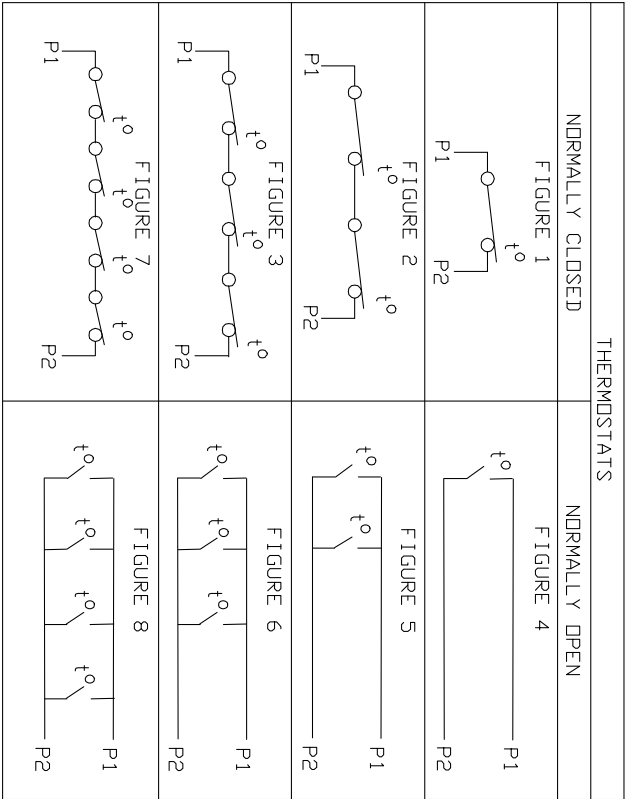
- 6 MASS (KGS): 635

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

G405T/404T XP TEFC,FOOT,DRILL RIG DUTY,16CB1001A01 BOX

CONNECTION DIAGRAM
ACCESSORIES

MOTOR WINDING THERMOSTATS		
CONTACTS _____ @ _____ °C		
FIGURE NUMBER _____		
CONTACT RATING		
VOLTS	CONTINUOUS AMPERES	INRUSH AMPERES
110-120	3.0	30
220-240	1.5	15
440-480	0.75	7.5
550-600	0.60	6.0



CUSTOMER _____ CUSTOMER ORDER NO. _____ S.O. NO. _____

418174-006

418174-006

REV. DESC: LOADED TO BUS		
REV. LTR: A	VERSION: 01	TDR: 000000570390
FILE: \RAG\00013\849	REVISED: 10:16:21 12/07/2010	BY: RAGDRF
MTL: -		

BALDOR

A-C MOTOR CONNECTION ACCESSORIES

SH 1 of 1

416820-036

A-C MOTOR
CONNECTION DIAGRAM
STANDARD 3 LEAD CONNECTED



(N.P. 1575-BA)

416820-036

REV. DESC: LOADED TO BUS, C/R 335225		
REV. LTR: -	VERSION: 00	TDR: 000000538207
FILE: \MGA\00000\682		REVISED: 11: 54: 06 04/30/2010
MTL: -		BY: RAGRA

BALDOR

CONN DIAG - STANDARD 3 LEAD
SH 1 of 1