ABB BALDOR RELIANCE

Customer information packet

EM25454T-4

450HP, 1780RPM, 3PH, 60HZ, 449T, DP, F1
Class - None
Division - Not Applicable

7/8/2026 5:34:07 PM

Specifications

Enclosure	DP
Frame	449T
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	450.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CURUSEEV
Ambient Temperature	40 °C
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	507.000 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	96.2 %
Feedback Device	NO FEEDBACK
Heater Indicator	No Heater
High Voltage Full Load Amps	507.0 a
Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	F
Lifting Lugs	Standard Lifting Lugs
Motor Lead Quantity/Wire Size	12 @ 1 AWG
Motor Standards	NEMA
Motor Type	A44144M
Mounting Arrangement	F1

Part Detail

Revision	A
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	A44WG3143
Layout	604989-505
Eff. date	03-01-2017
CD Diagram	416820-008
Poles	04
Leads	6#1 (02 per group)
Proprietary	False
Created date	11-25-2015

Number of Poles	4
Overall Length	48.12 IN
Power Factor	86
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Diameter	3.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1780 rpm
Speed Code	Single Speed
Starting Method	Wye Start - Delta Run
Thermal Device - Bearing	None
Thermal Device - Winding	None

Nameplate

NP2496L
MOBIL POLYREX EM

NP2349L

SPEC NO.	A44-8067-3143	**CAT.NO.**	EM25454T-4						**FRAME**	449T	
HP	450	**VOLTS**	460	**PHASE**	3	**DESIGN**	B	**TYPE**	P		
RPM	1780	**AMPS**	507	**HZ**	60	**AMB**	40	**SF**	1.15		
DRIVE END BEARING	90BC03J30X	**DUTY**	CONT	**INSUL.CLASS**	F						
OPP D.E. BEARING	90BC03J30X	**ENCL**	DP	**CODE**	F						
SER.NO.		**POWER FACTOR**	86			**NEMA-NOM-EFFICIENCY**	96.2				
						MAX CORR KVAR	89	**GUARANTEED EFFICIENCY**	95.4		
						NEMA NOM/CSA QUOTED EFF					
									MOTOR WEIGHT	2475	

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	449T	450	P	3/60	1780	460

AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
507	CONT	40/B	1.15	B	F	PRXE

E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES.@25 °C OHMS (BETWEEN LINES)
433784	418143043BE	---	---	.00749

PERFORMANCE

LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	137	1800	3.65	0
1/4	113	183	1795	60.7	94.8
2/4	225	273	1791	80.1	96.4
3/4	337	384	1786	85.1	96.5
4/4	450	507	1780	86.3	96.2
5/4	563	635	1774	86.7	95.7

SPEED TORQUE

	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	154	2044	3117
PULL UP	1360	137	1823	2548
BREAKDOWN	1723	240	3183	1628
FULL LOAD	1780	100	1328	507

AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE

REMARKS: CALCULATED DATA
XE MOTOR-NEMA NOM. EFF. 96.2 PCT.

BALDOR

DR. BY W. L. SMITH
CK. BY R. H. KIRK
APP. BY K.W.KANOUFF
DATE 09/27/04

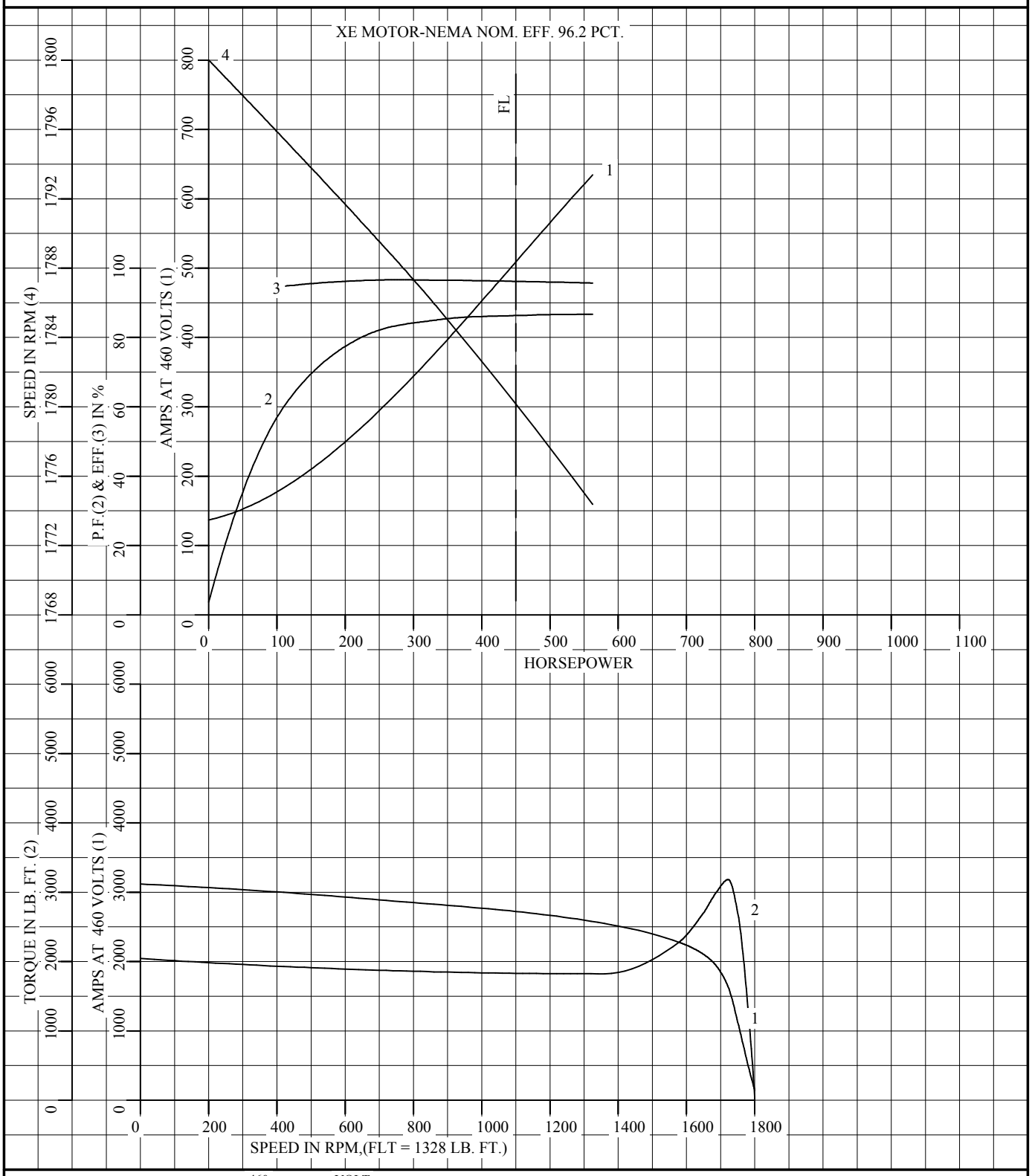
A-C MOTOR PERFORMANCE DATA

A44WG3143-R001
ISSUE DATE 09/24/04

ABB BALDOR RELIANCE

CUSTOMER INFORMATION PACKET EM25454T-4 - 450HP, 1780RPM, 3PH, 60HZ, 449T, DP, F1

FRAME 449T	RPM 1780	S.F. 1.15	ROTOR 418143043BE
HP 450	VOLTS 460	NEMA DESIGN B	TEST S.O. CALCULATED DATA
TYPE P	AMPS 507	CODE LETTER F	TEST DATE ---
PHASE/HERTZ 3/60	DUTY CONT	ENCLOSURE PRXE	STATOR RES.@ 25 ℃ .00749
	AMB ℃/INSUL 40/B	E/S 433784	OHMS (BETWEEN LINES)



AMPERES SHOWN FOR 460 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

BALDOR

DR. BY W. L. SMITH
CK. BY R. H. KIRK
APP. BY K.W.KANOUFF
DATE 09/27/04

A–C MOTOR PERFORMANCE CURVES

A44WG3143-R001

ISSUE DATE 09/24/04

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

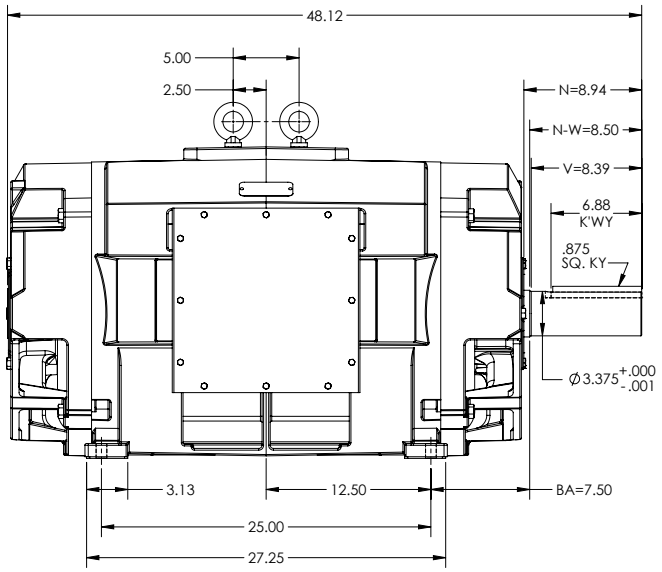
604989-505

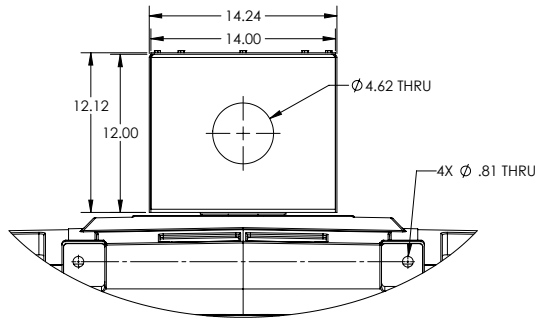
ENCLOSURE: PROTECTED; OPEN DRIP PROOF

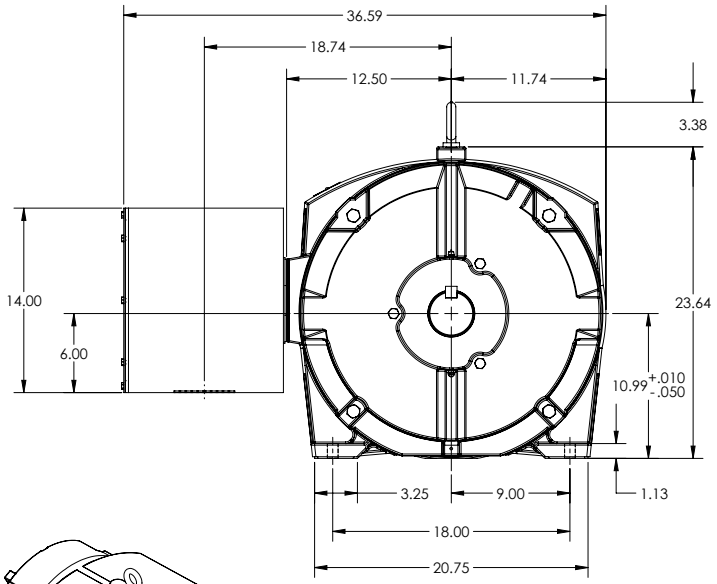
MOUNTING: FOOT, F-1 SIDE

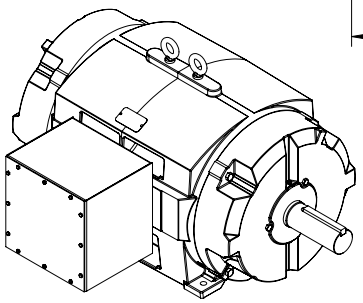
FRAME E449T
14X14X12 FABRICATED STEEL C/BOX

COOLING: SELF-VENTILATED









MOTOR WRIGHT: 2100 LBS
*MAY VARY BY 15% DEPENDING ON RATING

DIMENSIONS ARE IN INCHES

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

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" T.I.R.

SHEET NUMBER 1 OF 1

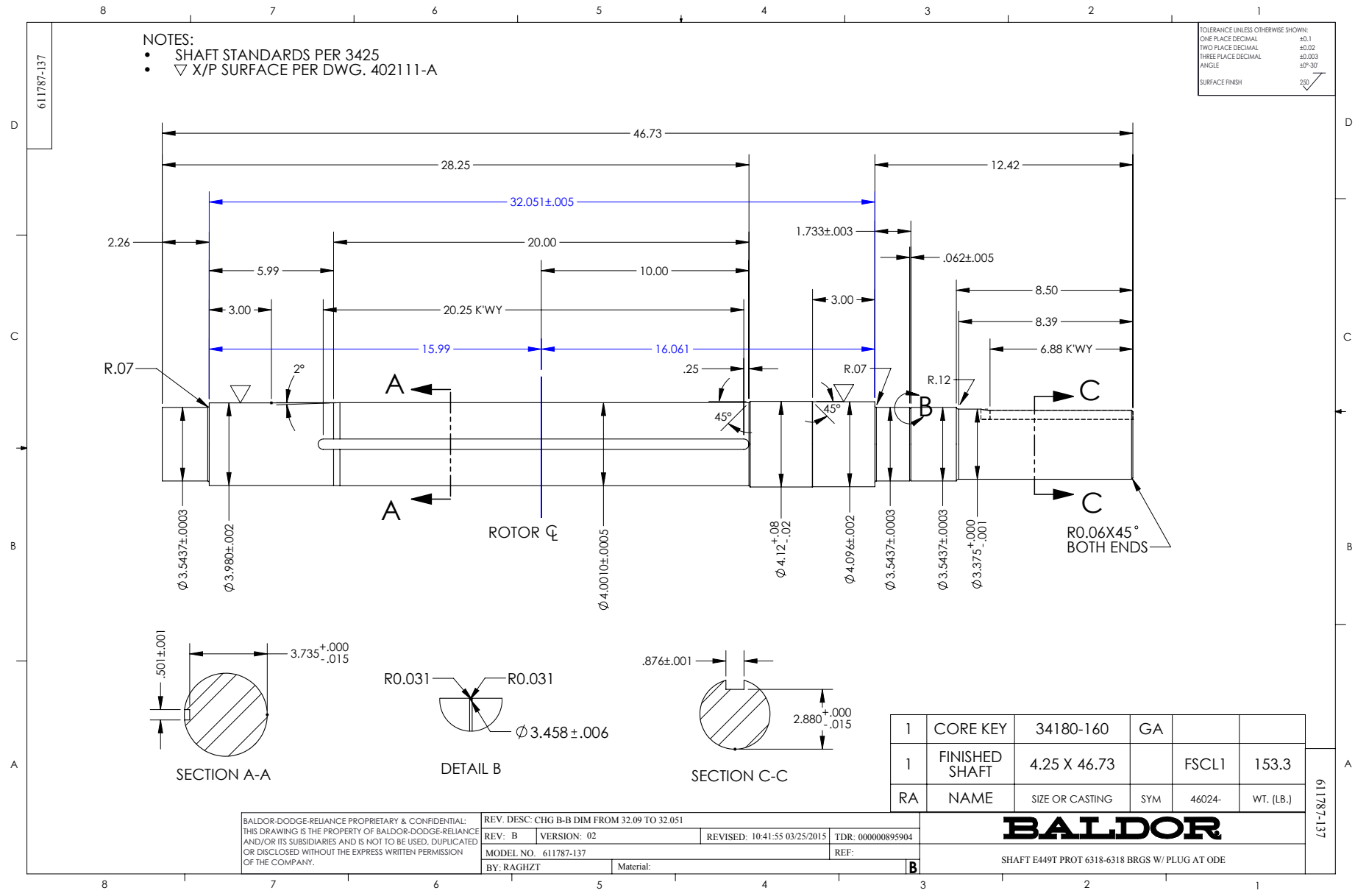
604989-505

REV. DESC: UPDATE MODEL TO ADD EXTERNAL HARDWARE PER PROD MGM			
REV: B	VERSION: 02	REVISED: 07:48:44 07/14/2022	TDR: 000001193529
MODEL NO. 604989-505			
BY: USBUFRA		C	

BALDOR

449T PROT F-1 FT - 14X14X12 FAB STL C/BOX

604989-505


NOTES:
• SHAFT STANDARDS PER 3425
• ▽ X/P SURFACE PER DWG. 402111-A
611787-137
TOLERANCE UNLESS OTHERWISE SHOWN:
ONE PLACE DECIMAL ±0.1
TWO PLACE DECIMAL ±0.02
THREE PLACE DECIMAL ±0.003
ANGLE ±0°-30'
SURFACE FINISH 250
46.73
28.25
12.42
32.051±.005
2.26
20.00
1.733±.003
.062±.005
5.99
10.00
8.50
3.00
20.25 K'WY
3.00
8.39
15.99
16.061
6.88 K'WY
R.07
2°
.25
R.07
R.12
45°
45°
A
A
B
C
C
ROTOR ℄
Ø3.5437±.0003
Ø3.980±.002
Ø4.0010±.0005
Ø4.12+.08 -.02
Ø4.096±.002
Ø3.5437±.0003
Ø3.5437±.0003
Ø3.375+.000 -.001
R0.06X45° BOTH ENDS
.501±.001
3.735+.000 -.015
SECTION A-A
R0.031
R0.031
Ø3.458±.006
DETAIL B
.876±.001
2.880+.000 -.015
SECTION C-C
1 CORE KEY 34180-160 GA
1 FINISHED SHAFT 4.25 X 46.73 FSCL1 153.3
RA NAME SIZE OR CASTING SYM 46024- WT. (LB.)
611787-137
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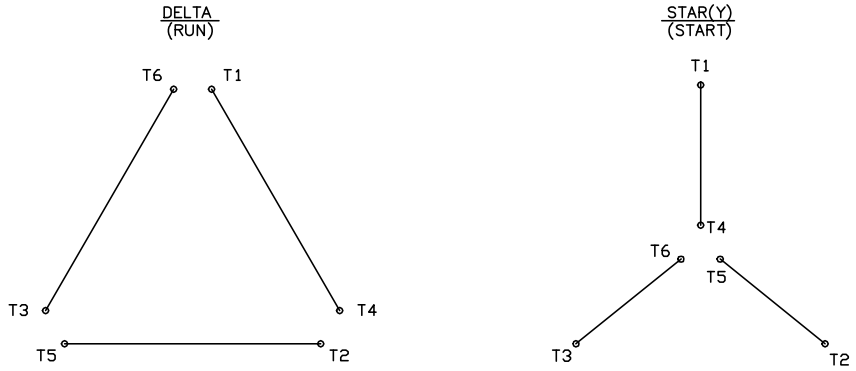
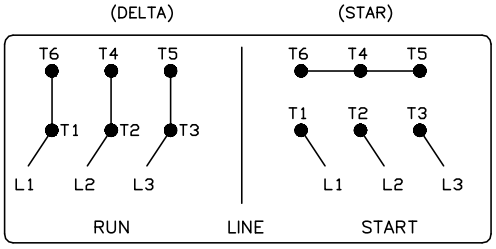
REV. DESC: CHG B-B DIM FROM 32.09 TO 32.051
REV: B VERSION: 02 REVISED: 10:41:55 03/25/2015 TDR: 000000895904
MODEL NO. 611787-137 REF:
BY: RAGHZT Material: B
BALDOR
SHAFT E449T PROT 6318-6318 BRGS W/ PLUG AT ODE

416820–008

A–C MOTOR
CONNECTION DIAGRAM

STANDARD 6 LEAD Y START – DELTA RUN





(N. P. 1767-DC)

REV. DESC: ADDED T4 TO Y CONNECT DIAGRAM		
REV. LTR: D	VERSION: 04	TDR: 000000847713
FILE: \RAG\00001\808	REVISED: 10:41:26 04/08/2014	BY: RAGJSS1
MTL: –		

BALDOR

CONNECT DIAGRAM STD 6 LEAD Y START DELTA RUN

SH 1 of 1

416820–008