



GE INDUSTRIAL MOTORS
a **WOLONG** company

Product Technical Information

December 18, 2020

Data shown is for the current revision model #. Ensure your nameplate model # matches.

Model Number:	5KS509DAJ6070A
Catalog Number:	V956
Instruction Manual:	GEI-M1045
Connection Diagram:	GEM2034E-FIG19
Outline Drawing:	148CB59VMKKFGAA0001

Accessory Connection Diagrams

Bearing Thermocouple:	None	Heater:	3027JE-1C
RTD:	None	Thermistor:	None
Thermostat:	None	Winding Thermocouple:	None
Bearing RTD:	None		

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Marks:

MODEL NUMBER:	5KS509DAJ6070A	Estimated Weight:	4158 Lbs
Outline Drawing:	148CB59VMKKFGAA0001	Time Rating:	CONT
Connection Diagram:	GEM2034E-FIG19	Enclosure:	WPI
Instruction Book:	GEI-M1045	Encl Construction:	OPEN
Design Code:	50ED1309AD	Ambient Max(°C):	40
Type:	KS	Alt Ambient Max(°C):	--
Frame:	B509TP24	Insulation Class:	F
Phases:	3	NEMA Design:	B
Poles:	4	Nominal Efficiency:	96.2 %
Output Power:	500HP 370KW	Guaranteed Efficiency:	95.4 %
RPM:	1785	3/4 Load Efficiency:	--
Voltage:	460	KVA Code:	G
Hertz:	60	Max KVAR:	91.6
Amps - FL:	547.0	Power Factor:	89.0
Service Factor:	1.15	Bearing - DE:	6219ZC3
Alt Service Factor:	--	Bearing - ODE:	29330

Enclosure is Weather Protected One

Stamped Nameplate Notes:

NEMA ENCLOSURE WP-I, CSA ENCL DP
 THERMOSTAT LEADS TB1-TB2:TRIP
 HTR LDS HE1-HE2 115V 350W
 UPPER BRG LUBE OIL: 10.82 QTS
 6 DEG C TO 40 DEG C :ISO 150(MINERAL OR
 SYNTHETIC)
 -15 DEG C TO 5 DEG C : ISO 68 SYNTHETIC
 LOWER BRG LUBE OIL: 2.5 QTS
 0 DEG C TO 40 DEG C : ISO 32(MINERAL OR
 SYNTHETIC)
 -15 DEG C TO 0 DEG C : ISO 32 SYNTHETIC
 ROT CCW FACING TOP LEAD/PH SEQ 1-2-3/1-2-3
 VERTICAL NPI
 INVERTER DUTY PER NEMA MG1 PART 31
 ALTERNATE RATING FOR PWM CONTROL
 1.0 SF. VAR TORQUE RANGE 5-60 HZ
 SUITABLE FOR 400 HP, 380V, 50 HZ WITH
 532 AMPS AND 1485 RPM AT 1.0 S.F
 2750 LBS MIN CONTINUOUS DOWNTHRUST REQ"D



Additional Information:

4 POLE, VERT HOLLOW SHAFT HIGH THRUST
NON-REVERSE COUPLING, BX=2.188
(3) NC THERMOSTAT LEADS TO MAIN C/BOX
115V HEATER LEADS TO MAIN C/BOX
VIBRATION LIMIT-GRADE B
SHAFT GROUND RING AT LOWER END BRG CAP
INSULATED BEARING SYSTEM AT UPPER END
RCF=1844 CPM CG=27.2 IN STAT DEF=0.0104 IN
C/B GRD PLATE
BEARING LIFE 8760 HOURS AT 27484 LB THRUST
2500 Cu. In. CBOX
SELF RELEASE PINS 235A4557AF1 AS KIT IN
IN BAG 235A4786AA5 SHIP LOOSE ALONG WITH
THIS MOTOR;
PART WINDING START



Performance Characteristics

1st Winding 1st Connection

Design: 50ED1309AD

Marks:

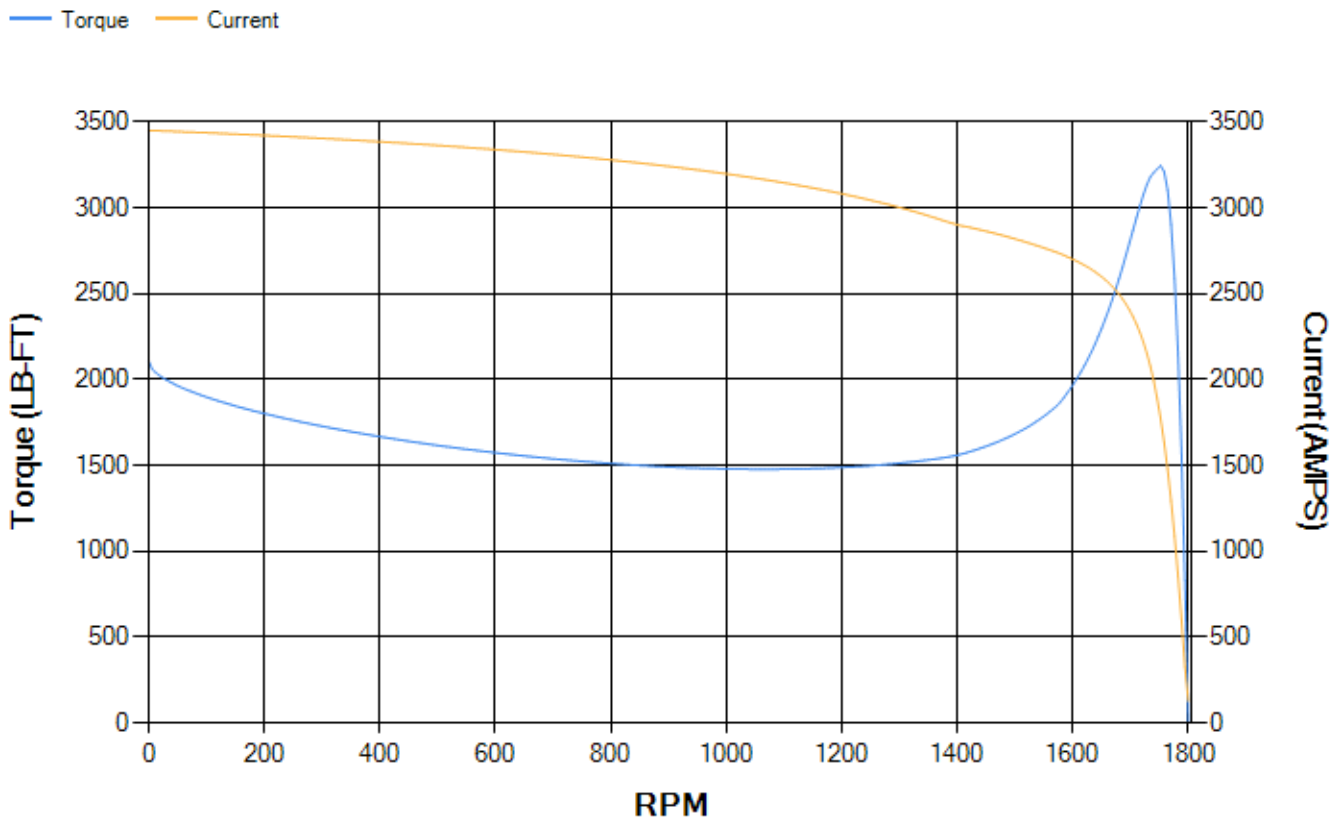
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	94.52	94.65	94.97	94.63	93.67	89.79	0.00
% PF	88.7	88.98	89.94	87.93	83.37	67.1	9.24
AMPS	697.7	638.96	547.13	421.81	299.64	194.19	127.79

TORQ(FL)#FT	1469.84	TORQ(LR)%FL	143.67	TORQ(BD)%FL	218.18
AMPS(LR)	3452.22	PF AT START	0.21		

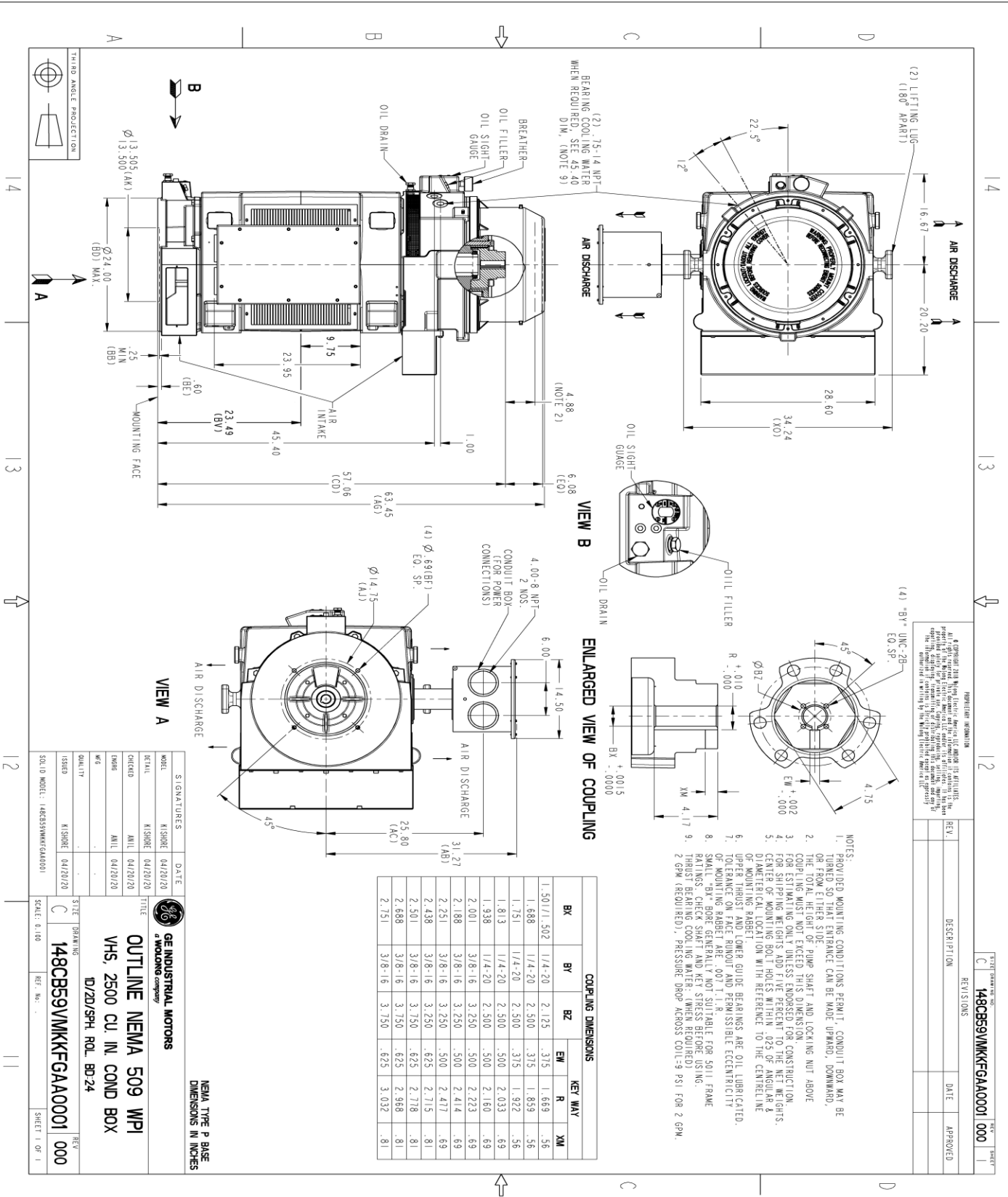
This motor is capable of two cold or one hot start with a maximum connected load inertia of 6102 Lb-Ft Sq (256.89 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 30 seconds. Safe stall time at 100% voltage is 56 seconds cold, 35 seconds hot. Rotor inertia is 155.16 Lb-Ft Sq (6.53 Kg-meter Sq).

Open Circuit A-C:	1.468	Short Circuit D-C:	0.039
Short Circuit A-C:	0.051	X/R Ratio:	14.726
Stator Slots:	72	Rotor Slots:	56

Speed Torque Current Curve (First Connection, First Speed)



Marks:



REVISION INFORMATION

REV.	DESCRIPTION	DATE	APPROVED

148CB59VMKFGAA001 000

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**OUTLINE NEMA 509 WPI
VHS, 2500 CU IN COND BOX**

D/2D/SPH. ROL. BD-24

148CB59VMKFGAA001

SCALE: 0.100

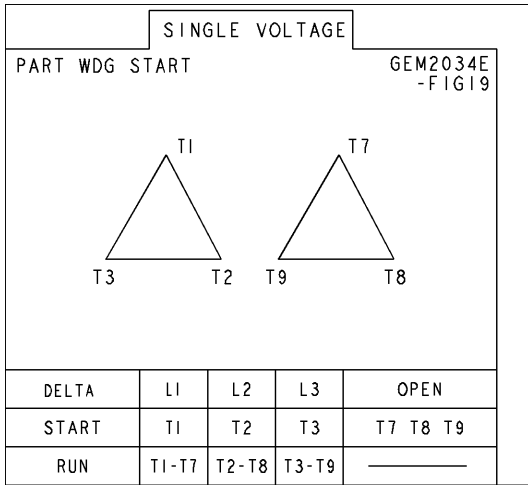
SHEET 1 OF 1

SIGNATURES	DATE
MODEL KISHORE 04/20/20	
REVIEW KISHORE 04/20/20	
CHECKED ANIL 04/20/20	
DESIGN ANIL 04/20/20	
DATE	
QUALITY	
ISSUED KISHORE 04/20/20	
SIZE DRAWING	
SOL. ID MODEL: 148CB59VMKFGAA001	

NEMA TYPE P BASE
DIMENSIONS IN INCHES

Marks:

Connection Diagram
GEM2034E-FIG19



Heater Connection
3027JE-1C



SUPPLY VOLTAGE LEADS	L1	L2
HEATER LEADS	HE1	HE2

