



**GE INDUSTRIAL MOTORS**  
a **WOLONG** company

# Product Technical Information

June 25, 2020

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

|                            |                       |
|----------------------------|-----------------------|
| <b>Model Number:</b>       | <b>5KS445XAA2054C</b> |
| <b>Catalog Number:</b>     | <b>M9360</b>          |
| <b>Instruction Manual:</b> | GEI-56128             |
| <b>Connection Diagram:</b> | GEM2034E-FIG7         |
| <b>Outline Drawing:</b>    | 239C6600ZC            |

## Accessory Connection Diagrams

|                              |      |                              |      |
|------------------------------|------|------------------------------|------|
| <b>Bearing Thermocouple:</b> | None | <b>Heater:</b>               | None |
| <b>RTD:</b>                  | None | <b>Thermistor:</b>           | None |
| <b>Thermostat:</b>           | None | <b>Winding Thermocouple:</b> | None |
| <b>Bearing RTD:</b>          | None |                              |      |

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Marks:

|                            |                       |                               |          |
|----------------------------|-----------------------|-------------------------------|----------|
| <b>MODEL NUMBER:</b>       | <b>5KS445XAA2054C</b> | <b>Estimated Weight:</b>      | 1970 Lbs |
| <b>Outline Drawing:</b>    | 239C6600ZC            | <b>Time Rating:</b>           | CONT     |
| <b>Connection Diagram:</b> | GEM2034E-FIG7         | <b>Enclosure:</b>             | TEFC     |
| <b>Instruction Book:</b>   | GEI-56128             | <b>Encl Construction:</b>     | 841      |
| <b>Design Code:</b>        | 44BD1157A             | <b>Ambient Max(°C):</b>       | 40       |
| <b>Type:</b>               | KS                    | <b>Alt Ambient Max(°C):</b>   | --       |
| <b>Frame:</b>              | 445T                  | <b>Insulation Class:</b>      | H        |
| <b>Phases:</b>             | 3                     | <b>NEMA Design:</b>           | B        |
| <b>Poles:</b>              | 4                     | <b>Nominal Efficiency:</b>    | 95.8 %   |
| <b>Output Power:</b>       | 150HP 111KW           | <b>Guaranteed Efficiency:</b> | 95.4 %   |
| <b>RPM:</b>                | 1780                  | <b>3/4 Load Efficiency:</b>   | 96.1 %   |
| <b>Voltage:</b>            | 460                   | <b>KVA Code:</b>              | G        |
| <b>Hertz:</b>              | 60                    | <b>Max KVAR:</b>              | 42.4     |
| <b>Amps - FL:</b>          | 169.0                 | <b>Power Factor:</b>          | 86.5     |
| <b>Service Factor:</b>     | 1.15                  | <b>Bearing - DE:</b>          | NU 318   |
| <b>Alt Service Factor:</b> | --                    | <b>Bearing - ODE:</b>         | 6318ZC3  |

Enclosure is Totally Enclosed Fan-Cooled

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Stamped Nameplate Notes:

IEEE-STD-841-2009  
 ROLLER BEARING - FOR BELTED LOAD ONLY  
 DE BRG 90RU03M, ODE BRG 90BC03JP3  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS445XAA2054C S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200 C GC  
 CL 1 ZONE2 AEX NA IIC 200C;CL 1 DIV2 GRP ABCD 200C  
 IN -25C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR  
 SURF TEMP 200C AT 1.15SF ON SINE-WAVE PWR  
 OR 200 C VT OR 230 C CT OR 200 C CHP PWM CONTROL  
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB  
 VT 0-60 HZ, CT 15-60 HZ, CHP 60-90 HZ.



**Additional Information:**

4P - T EXTN  
PAINTED FRAME ID & SHAFT,  
FAN COVER INSIDE & ODE E/S OUTSIDE  
700 CU IN - 3.00" NPT  
INPRO SEAL BOTH ENDS  
OIL RESISTANT SLEEVING ON LEADS  
.002" TIR SHAFT RUNOUT  
ROUTINE TEST REPORT AND 5 POINT VIBRATION TEST  
REPORT INCLUDED IN C/B  
COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS,  
APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS,  
RABBETS AND PLUG THREADS.  
B5F4C4 HIGH FATIGUE STEEL AISI 4142 SHAFT MATERIAL  
GROUND PAD  
F1 MOUNTING



**Performance Characteristics**

1st Winding 1st Connection

**Design: 44BD1157A**

**Marks:**

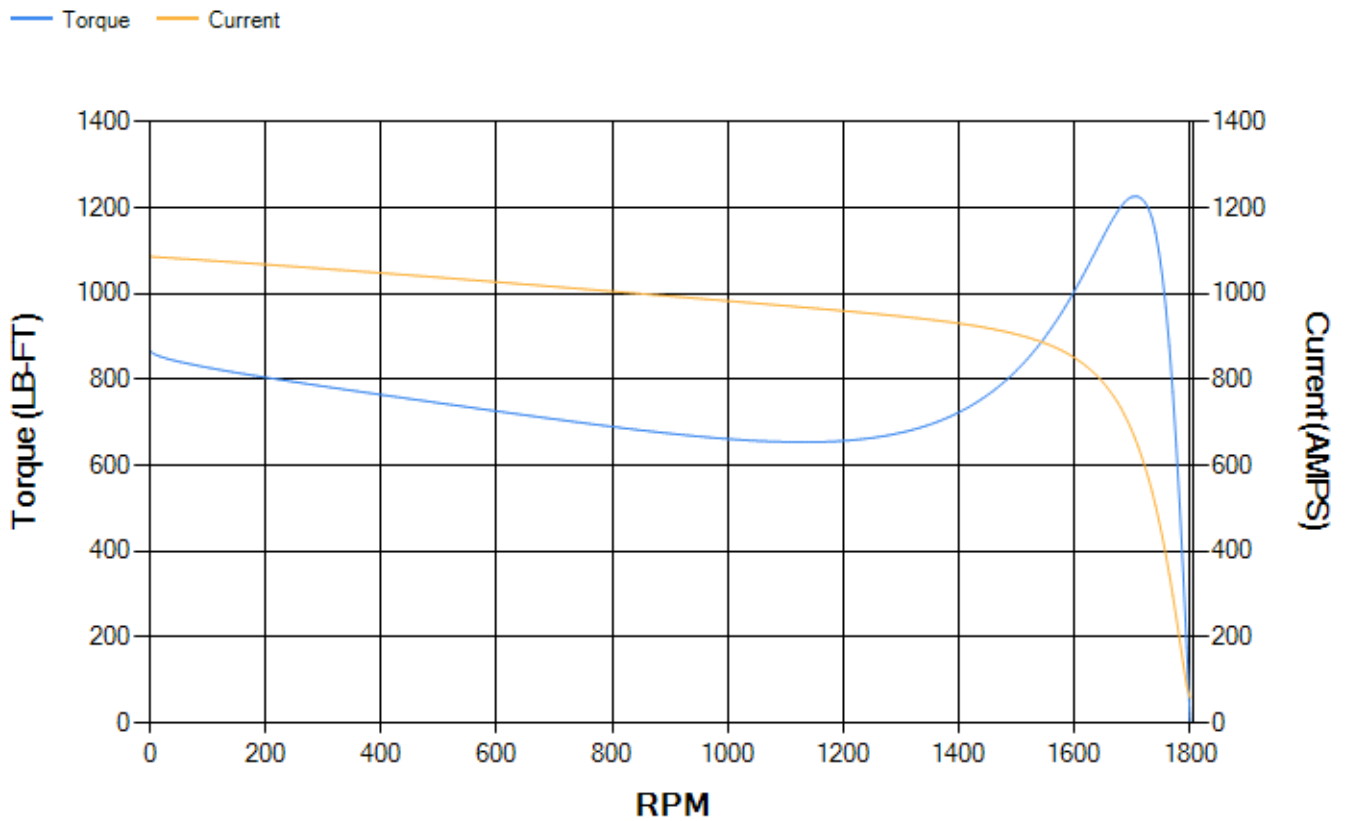
| LOAD % | 125.0  | 115.0  | 100.0  | 75.0   | 50.0  | 25.0  | 0.0   |
|--------|--------|--------|--------|--------|-------|-------|-------|
| % EFF  | 95.38  | 95.58  | 96.03  | 96.06  | 95.8  | 93.81 | 0.00  |
| % PF   | 87.62  | 87.25  | 86.27  | 82.72  | 74.1  | 52.01 | 3.29  |
| AMPS   | 209.97 | 193.58 | 169.48 | 132.51 | 98.88 | 71.93 | 59.21 |

|                    |         |                    |        |                    |        |
|--------------------|---------|--------------------|--------|--------------------|--------|
| <b>TORQ(FL)#FT</b> | 441.8   | <b>TORQ(LR)%FL</b> | 196.74 | <b>TORQ(BD)%FL</b> | 277.39 |
| <b>AMPS(LR)</b>    | 1086.96 | <b>PF AT START</b> | 0.33   |                    |        |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 2367 Lb-Ft Sq (99.65 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 23 seconds. Safe stall time at 100% voltage is 53 seconds cold, 27 seconds hot. Rotor inertia is 62.69 Lb-Ft Sq (2.64 Kg-meter Sq).

|                           |       |                           |        |
|---------------------------|-------|---------------------------|--------|
| <b>Open Circuit A-C:</b>  | 0.754 | <b>Short Circuit D-C:</b> | 0.03   |
| <b>Short Circuit A-C:</b> | 0.037 | <b>X/R Ratio:</b>         | 11.458 |
| <b>Stator Slots:</b>      | 72    | <b>Rotor Slots:</b>       | 58     |

**Speed Torque Current Curve (First Connection, First Speed)**





**Marks:**

**Connection Diagram**  
**GEM2034E-FIG7**



| End shield Assembly |               |                |
|---------------------|---------------|----------------|
| Part Description    | DE Side Part# | ODE Side Part# |
| End Shield          | 115E4355AA1   | 115E4355LL1    |
| Bearing             | 235A2519AA01  | 235A2514AG01   |
| Slinger/Inproseal   | 235A4575GS5   | 235A4575GS5    |

| Fan & Fan Cover Assembly |             |
|--------------------------|-------------|
| Part Description         | Part#       |
| Fan                      | 159C7100AA2 |
| Fan Cover                | 128D6841AA1 |

| Conduit & Accessories Box Assembly |             |
|------------------------------------|-------------|
| Part Description                   | Part#       |
| Conduit Box                        | 118D4408AD2 |

| Mechanical Accessories |       |
|------------------------|-------|
| Part Description       | Part# |
| Brake                  |       |
| Tachometer             |       |

