

# Product Information Packet

February 3, 2017

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

<b>Model Number:</b>	<b>5KS284XAE5425D1</b>
<b>Catalog Number:</b>	<b>V859</b>
<b>Instruction Manual:</b>	GEK-95351
<b>Connection Diagram:</b>	GEM2034E-FIG1
<b>Outline Drawing:</b>	4002B5828PNP5364

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>5KS284XAE5425D1</b>	<b>Estimated Weight:</b>	460 Lbs
<b>Outline Drawing:</b>	4002B5828PNP5364	<b>Time Rating:</b>	CONT
<b>Connection Diagram:</b>	GEM2034E-FIG1	<b>Enclosure:</b>	TEFC
<b>Instruction Book:</b>	GEK-95351	<b>Encl Construction:</b>	841
<b>Design Code:</b>	28BD0164A	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	--
<b>Frame:</b>	L284VP10	<b>Insulation Class:</b>	H
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	2	<b>Nominal Efficiency:</b>	91.7 %
<b>Output Power:</b>	25HP 18.5KW	<b>Guaranteed Efficiency:</b>	90.2
<b>RPM:</b>	3550	<b>3/4 Load Efficiency:</b>	92.6
<b>Voltage:</b>	460	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	4.8
<b>Amps - FL:</b>	28.0	<b>Power Factor:</b>	91.0
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	7310
<b>Alt Service Factor:</b>	--	<b>Bearing - ODE:</b>	6310-2ZC3

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

VERTICAL-841  
 PREMIUM EFFICIENT MOTOR  
 DE BRG 50BT03XP3 ODE BRG 50BC03JP3  
 SEVERE DUTY  
 EXCEPTION TO IEEE-STD-841-2009:THRUST BRG ON DE  
 INVERTER DUTY PER NEMA MG1 PART 31  
 ALTERNATE RATING FOR PWM CONTROL:  
 1.0 SF VAR TORQUE RANGE 0-60 HZ  
 MAX EXPOSED INTERNAL AND EXTERNAL SURFACE  
 TEMPERATURES UNDER USUAL SERVICE CONDITIONS  
 AT 1.00 S.F. DO NOT EXCEED 200 DEG C  
 STAMP NP249A5499AP AS BELOW:  
 MODEL:5KS284XAE5425D1 S/N: XXX  
 EX NA IIC T3 GC CSA.09.2216219  
 CLASS I, ZONE 2, AEX NA IIC T3  
 CLASS I, DIV 2, GROUPS A, B, C, D T3  
 -25C <= TAMB <= 40C

**Additional Information:**

2P - VP EXTN  
 C/BOX 137 CU IN-1.50 NPT  
 PAINTED FRAME ID & SHAFT,  
 FAN COVER INSIDE & ODE E/S OUTSIDE  
 ROUTINE AND 5 POINT VIBRATION TESTS INCL IN C/BOX  
 INPRO SEAL BOTH ENDS  
 E/SHLD GROUND STUD MTD ON DE C/BOX SIDE  
 SHAFT RUNOUT LIMIT .001" TIR

RCF 5000 CPM, STATIC DEFLECTION .0014 INCHES &  
CENTER OF GRAVITY 12.00 INCHES  
SOLID SHAFT HIGH THRUST  
COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS  
APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS, RABBETS,  
AND PLUG THREADS  
OIL RESISTANT SLEEVING ON LEADS  
BEARING LIFE 50000 HOURS AT 1232 LB THRUST  
BEARING LIFE 8760 HOURS AT 2275 LB THRUST

**Performance Characteristics**

1st Winding 1st Connection

**Design: 28BD0164A**

**Marks:**

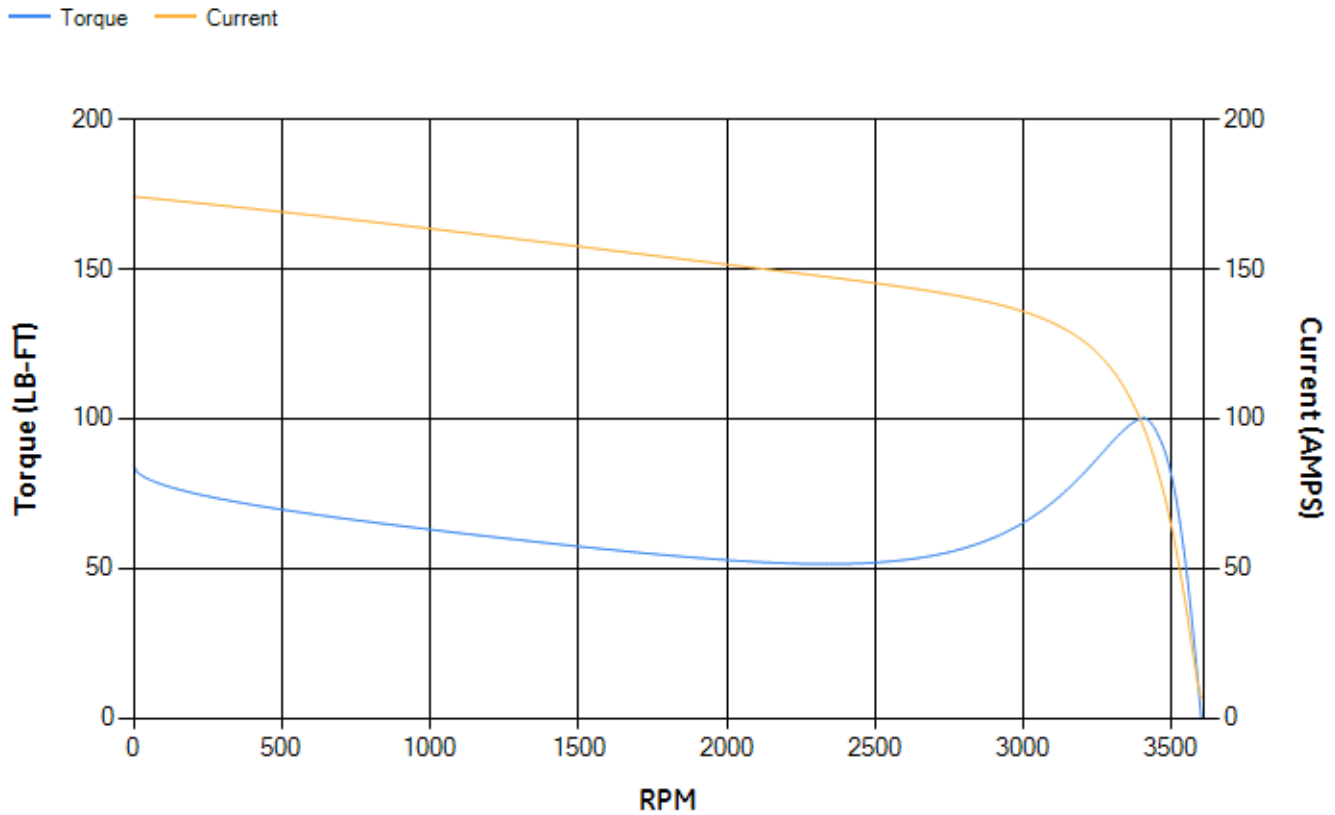
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	90.74	91.26	92.12	92.64	92.5	89.49	0.00
% PF	90.88	91.02	90.93	89.56	84.83	68.28	8.7
AMPS	35.47	32.39	27.93	21.15	14.91	9.57	6.63

<b>TORQ(FL)#FT</b>	36.99	<b>TORQ(LR)%FL</b>	227.95	<b>TORQ(BD)%FL</b>	270.04
<b>AMPS(LR)</b>	174.18	<b>PF AT START</b>	0.38		

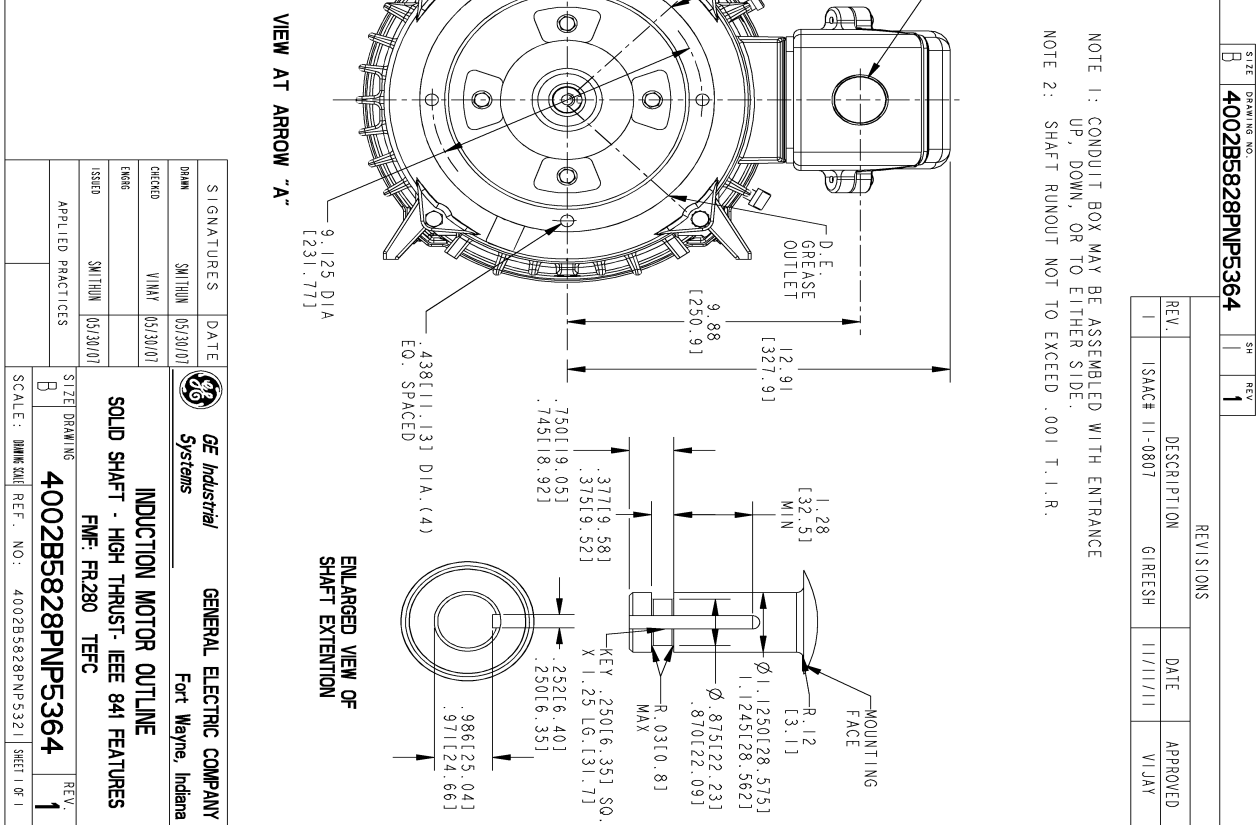
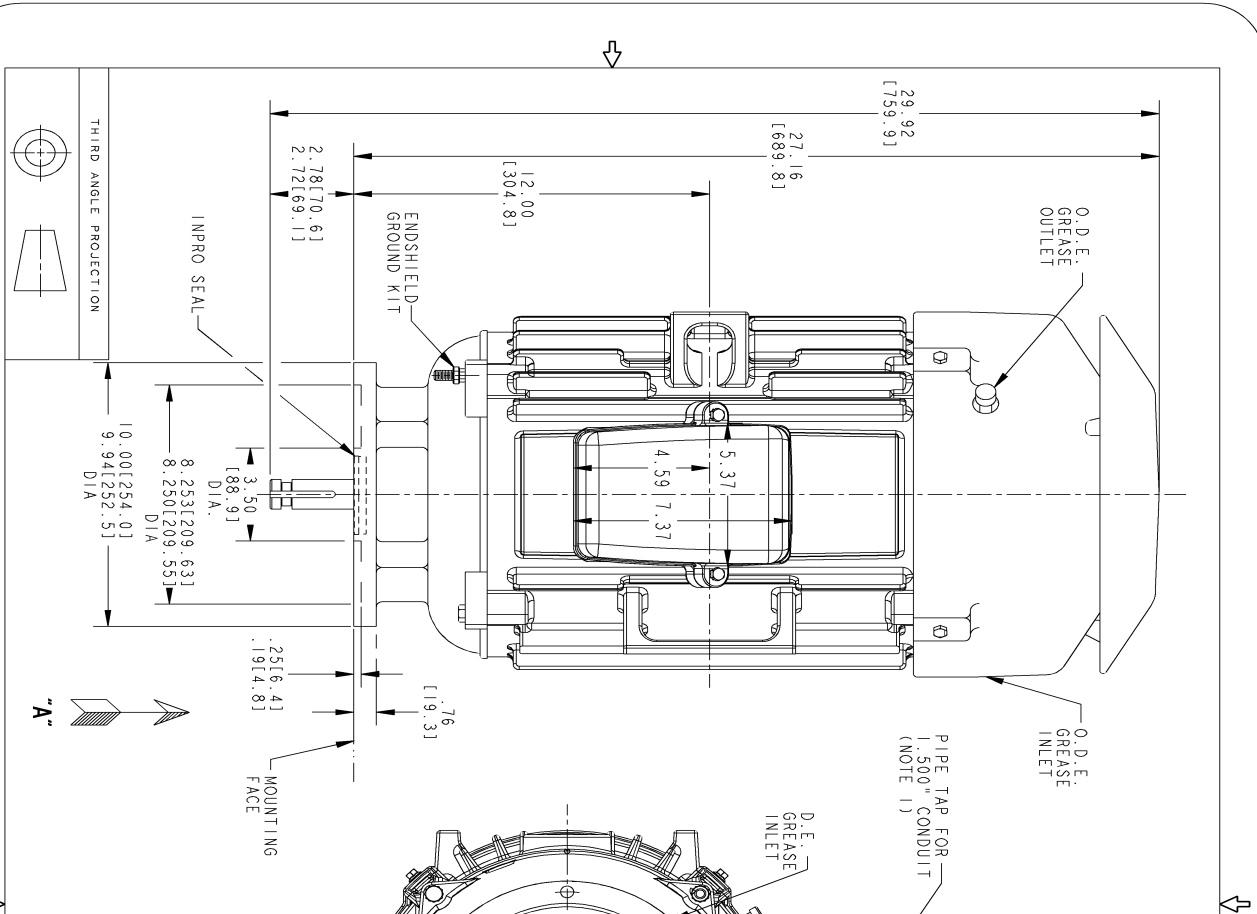
This motor is capable of two cold or one hot start with a maximum connected load inertia of 81 Lb-Ft Sq (3.41 Kg-meter Sq) at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 19 seconds. Safe stall time at 100% voltage is 39 seconds cold, 22 seconds hot. Rotor inertia is 2.13 Lb-Ft Sq (0.09 Kg-meter Sq).

<b>Open Circuit A-C:</b>	0.802	<b>Short Circuit D-C:</b>	0.013
<b>Short Circuit A-C:</b>	0.027	<b>X/R Ratio:</b>	4.951
<b>Stator Slots:</b>	48	<b>Rotor Slots:</b>	38

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



Marks:



NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN, OR TO EITHER SIDE.  
 NOTE 2: SHAFT RUNOUT NOT TO EXCEED .001 T. I. R.

REV.	DESCRIPTION	DATE	APPROVED
1	ISAC# 11-0807 GIREESH	11/11/11	V/JAY

SIGNATURES		DATE	
DESIGN	SMITHIN	05/30/01	
CHECKED	VINAY	05/30/01	
ENGR			
ISSUED	SMITHIN	05/30/01	
APPLIED PRACTICES			
SIZE DRAWING		REV. 1	
SCALE: DIMENSIONS		REF. NO: 4002B5828PNP5321 SHEET 1 OF 1	

**GE Industrial Systems**  
**GENERAL ELECTRIC COMPANY**  
 Fort Wayne, Indiana

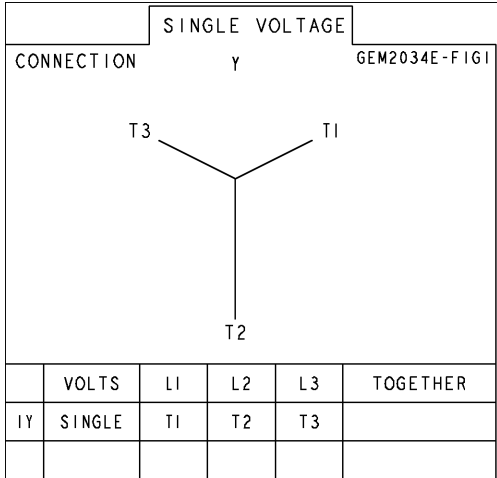
**INDUCTION MOTOR OUTLINE**  
**SOLID SHAFT - HIGH THRUST - IEEE 841 FEATURES**  
 FWF: FR280 TEFC

**4002B5828PNP5364**

DISTRIBUTION:

Marks:

**Connection Diagram**  
**GEM2034E-FIG1**



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	128D6229PH1	4004D5284SZ1
Bearing	235A2508ET01	235A2508EB01
Slinger/Inproseal	4002B5918CD4	4002B5914AG5

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	159C6704G02
Fan Cover	4003C5528BN-G01

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	4002B5728PA-G01

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	