



GE Energy

- DATA SHEET -

GE Power Conversion  
Custom 8000 (R)  
SQUIRREL CAGE MOTOR

CUSTOMER

CUSTOMER ORDER :

GE MODEL : 5K85121598801  
SO : 2852020  
QTY : 8

DESIGN : KC511W479A  
RI : 3218633  
SERIAL # : 285002730 / 285002737

POWER : 5500 HP  
POLES : 8  
VOLTAGE : 6600 V  
FREQUENCY : 60 Hz  
PHASES : 3  
TEMPERATURE RISE : 95°C / RTD @ SF 1.00

TYPE : K  
FRAME : 8512Z  
ENCLOSURE / COOLING : WP11  
SERVICE FACTOR : 1.15  
INSULATION CLASS : F  
TEMPERATURE CLASS : F

DRIVEN LOAD : Reciprocating Compressor  
LOAD WK<sup>2</sup> REF.TO MOTOR SHAFT : 791 Lbft<sup>2</sup>

MAX. ALTITUDE : 5100 ft  
AMB. TEMP. (MIN/MAX) : -18/49 °C

Calculated Performance

RATED RPM : 894 RPM  
RATED CURRENT : 428 A  
RATED TORQUE : 32300 Lbft  
RATED KVA : 4893  
STATOR CONNECTION : Y  
STARTING METHOD : SOFT STARTER  
TIME RATING : CONTINUOUS  
  
TOTAL WEIGHT (calculated) : 25200 Lb  
ROTOR WK<sup>2</sup> (calculated) : 6396 Lbft<sup>2</sup>  
  
NOISE PRESSURE AVERAGE LEVEL : 85 dBA @ 3.3 ft at no-load  
MAX CAPACITOR KVA<sub>r</sub> : 1000  
STATOR RESIST. @ 25C : 0.1100 ohm L-L  
  
X / R RATIO : 18.614  
OPEN CIRC. CONSTANT : 1.7886 s  
  
OUTLINE NUMBER : D0036130  
INSTRUCTION BOOK : GEEP-141-I

NEMA STARTING CODE : E  
LOCKED ROTOR CURRENT : 550%  
LOCKED ROTOR TORQUE : 80%  
PULL UP TORQUE : 80%  
BREAKDOWN TORQUE : 200%  
COUPLING TYPE : DIRECT  
ARRANGEMENT : F1FE  
ROTATION : CW ODE  
  
MAX. BRG.VIBR. [pk] : 0.1 in/sec  
BEARING TYPE : SLEEVE  
BEARING LUBRICATION : OIL  
END PLAY : 0.5 in  
LOCKED ROTOR TIME (100% V)  
COLD : 14 s  
HOT : 11 s  
  
NUMBER OF STARTS (NEMA MG1-20.12)  
COLD : 3  
HOT : 2  
  
STATOR / ROTOR (SLOTS) : 96 / 116

NOTES

VIBRATION LIMITS BASED ON MOTOR RUNNING UNCOUPLED AND WITH BEARING TEMPERATURE STABILIZED IN STIFF BASE.  
COPPER BAR ROTOR CONSTRUCTION

PREPARED BY : PEDRO RUBIO  
APPROVED :

06-26-2018 REV : 0

SH 1 OF 2

DS2852020



MODEL : 5K85121598801

SO : 2852020

RI : 3218633

Calculated Performance

Load(%)	P.F (pu)	Eff (%)	Curr. (A)
No Load			105
115	0.86	96.0	500
100	0.87	96.5	428
75	0.86	96.5	324
50	0.82	96.2	227

ACCESSORIES

- 2 BEARING RTD - Pt 100 Ohms AT 0 °C - DOUBLE  
Alarm = 90 °C Trip = 100 °C
- 12 STATOR RTD - Pt 100 Ohms AT 0 °C  
Alarm = 150 °C Trip = 160 °C
- 4 GALVANIZED STEEL AIR FILTERS
- 1 AIR DIFFERENTIAL PRESSURE SWITCH - DWYER 1950-0
- 1 SPACE HEATER - TOTAL 330W - 120V - 1PH(Low SHEATH)
- 2 PROVISION FOR VIBRATION TRANSMITTER - METRIX 5484E

TESTS

- AC HIGH-POTENTIAL TEST
- DETERMINATION OF NO-LOAD LOSSES
- MEASUREMENT OF INSULATION RESISTANCE
- MEASUREMENT OF NO-LOAD CURRENT IN EACH PHASE
- MEASUREMENT OF NO-LOAD SPEED
- MEASUREMENT OF WINDING RESISTANCE
- MECHANICAL VIBRATION
- PHASE SEQUENCE VERIFICATION

NOTES

CUSTOMER TESTS SPECS :

REVISIONS

CURRENT PULSATION ANALYSIS (CALCULATED VALUES)

TOTAL SYSTEM INERTIA (lbf <sup>2</sup> ): .....	7187	APPARENT EFFICIENCY (%): .....	96.1
AVERAGE kW INPUT: .....	3851	APPARENT POWER FACTOR: .....	0.864
AVERAGE KVAR INPUT: .....	2244	CURRENT PULSATION (p.u. of rated current): .....	0.131
AVERAGE MOTOR HP OUTPUT: .....	4960	RMS CURRENT/PHASE (ampere): .....	390

PREPARED BY : PEDRO RUBIO  
APPROVED :

SH 2 OF 2

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DS2852020



# INDUCTION MOTOR RUNNING PERFORMANCE

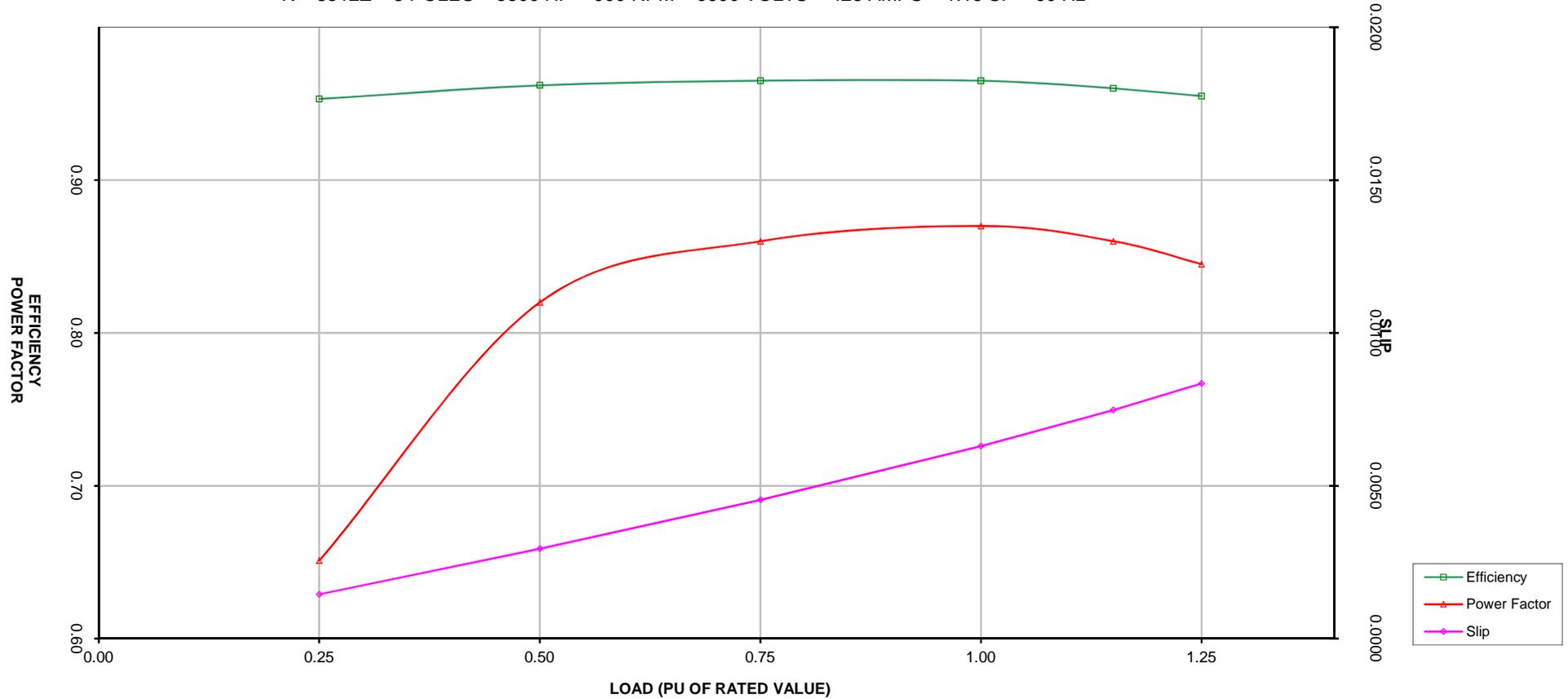
(Calculated Values)

CUST.:  
PROJ.:  
APPL.: Reciprocating Compressor

MODEL: 5K85121598801  
SER #: 285002730  
RI: 3218633

Rated Load - Efficiency: 0.965 Power Factor: 0.870 Slip: 0.0063

K 8512Z 8 POLES 5500 HP 900 RPM 6600 VOLTS 428 AMPS 1.15 SF 60 Hz





# INDUCTION MOTOR STARTING CHARACTERISTICS

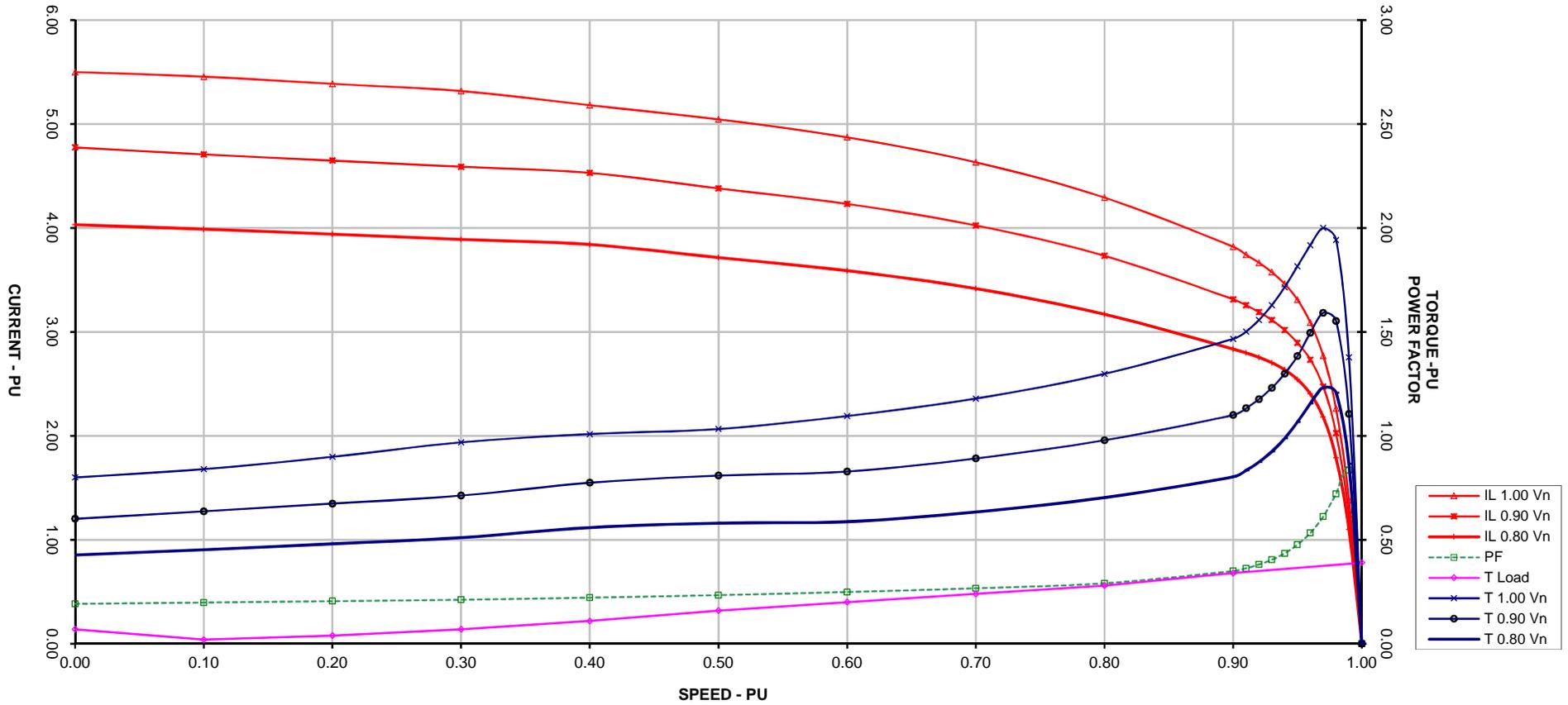
(Calculated Values)

CUST.:  
PROJ.:  
APPL.: Reciprocating Compressor

MODEL: 5K85121598801  
SER #: 285002730  
RI: 3218633

Torque (Nominal) = 32300 Lbft / 43808 Nm

K 8512Z 8 POLES 5500 HP 900 RPM 6600 VOLTS 428 AMPS 1.15 SF 60 Hz





# INDUCTION MOTOR THERMAL LIMIT CHARACTERISTICS

(Calculated Values)

Note: Motor initially at operating temperature

CUST.:  
PROJ.:  
APPL.: Reciprocating Compressor

MODEL: 5K85121598801  
SER #: 285002730  
RI: 3218633

$WK^2 / GD^2$  (Total) = 7190 Lbft<sup>2</sup> / 1212 kgfm<sup>2</sup>

IEEE Std.620

K 8512Z 8 POLES 5500 HP 900 RPM 6600 VOLTS 428 AMPS 1.15 SF 60 Hz

