

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer							
Product line	: NEMA Premium Efficiency Three-Phase			Product code :	13273087		
				Catalog # :	12512ET3E445T-W22G		
Frame	: 444/5T			Cooling method	: IC411 - TEFC		
Insulation class	: F			Mounting	: F-1		
Duty cycle	: Cont.(S1)			Rotation ¹	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C			Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.			Approx. weight ²	: 1751 lb		
Protection degree	: IP55			Moment of inertia (J)	: 104 sq.ft.lb		
Design	: B						
Output [HP]	125	100	100	100	125	125	125
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	286/143	143	138	130	172	165	160
L. R. Amperes [A]	1830/915	915	980	991	877	941	992
LRC [A]	6.4x(Code G)	6.4x(Code G)	7.1x(Code H)	7.6x(Code J)	5.1x(Code E)	5.7x(Code F)	6.2x(Code G)
No load current [A]	112/56.0	55.4	59.3	62.3	55.4	59.3	62.3
Rated speed [RPM]	1185	985	985	985	980	980	985
Slip [%]	1.25	1.50	1.50	1.50	2.00	2.00	1.50
Rated torque [ft.lb]	554	533	533	533	670	670	666
Locked rotor torque [%]	210	200	229	250	160	180	200
Breakdown torque [%]	240	240	260	290	190	210	229
Service factor	1.15	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	34s (cold) 19s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level ²	69.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)
Efficiency (%)	25%	95.2	94.9	94.8	94.8	95.7	95.7
	50%	95.0	94.8	94.7	94.7	95.0	95.0
	75%	95.4	94.9	94.9	95.1	94.5	94.5
	100%	95.0	94.6	94.6	94.8	93.6	93.6
Power Factor	25%	0.45	0.43	0.40	0.38	0.51	0.47
	50%	0.70	0.68	0.65	0.62	0.76	0.73
	75%	0.79	0.79	0.77	0.75	0.82	0.81
	100%	0.83	0.84	0.83	0.81	0.85	0.84
Bearing type	: Drive end 6319 C3 Non drive end 6316 C3		Foundation loads				
Sealing	: WSeal WSeal		Max. traction : 3210 lb				
Lubrication interval	: 13000 h 16000 h		Max. compression : 4962 lb				
Lubricant amount	: 45 g 34 g						
Lubricant type	: Mobil Polyrex EM						
Notes							
USABLE @208V 316A SF 1.00 SFA 316A							
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.				These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.			
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



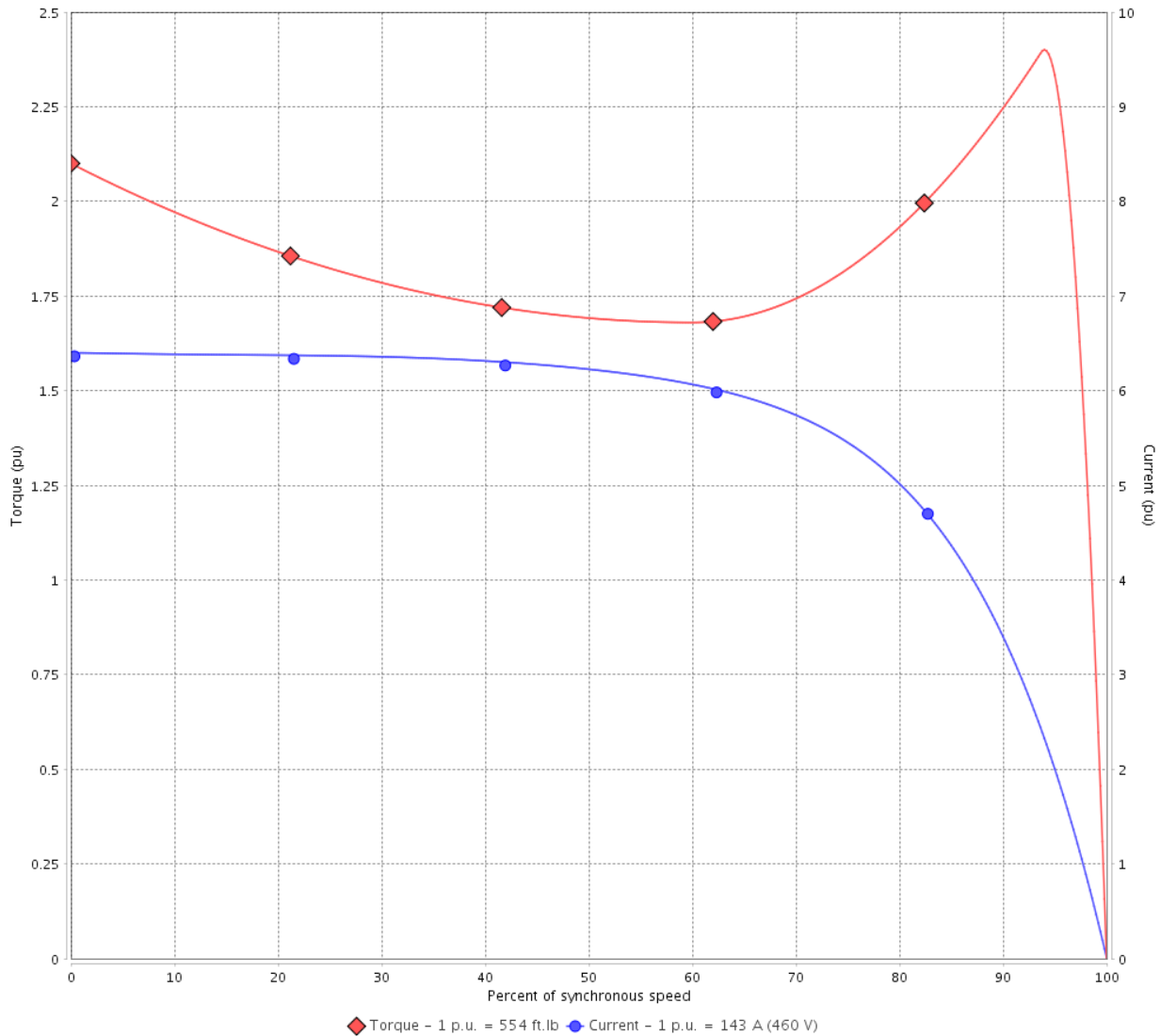
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 286/143 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 554 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



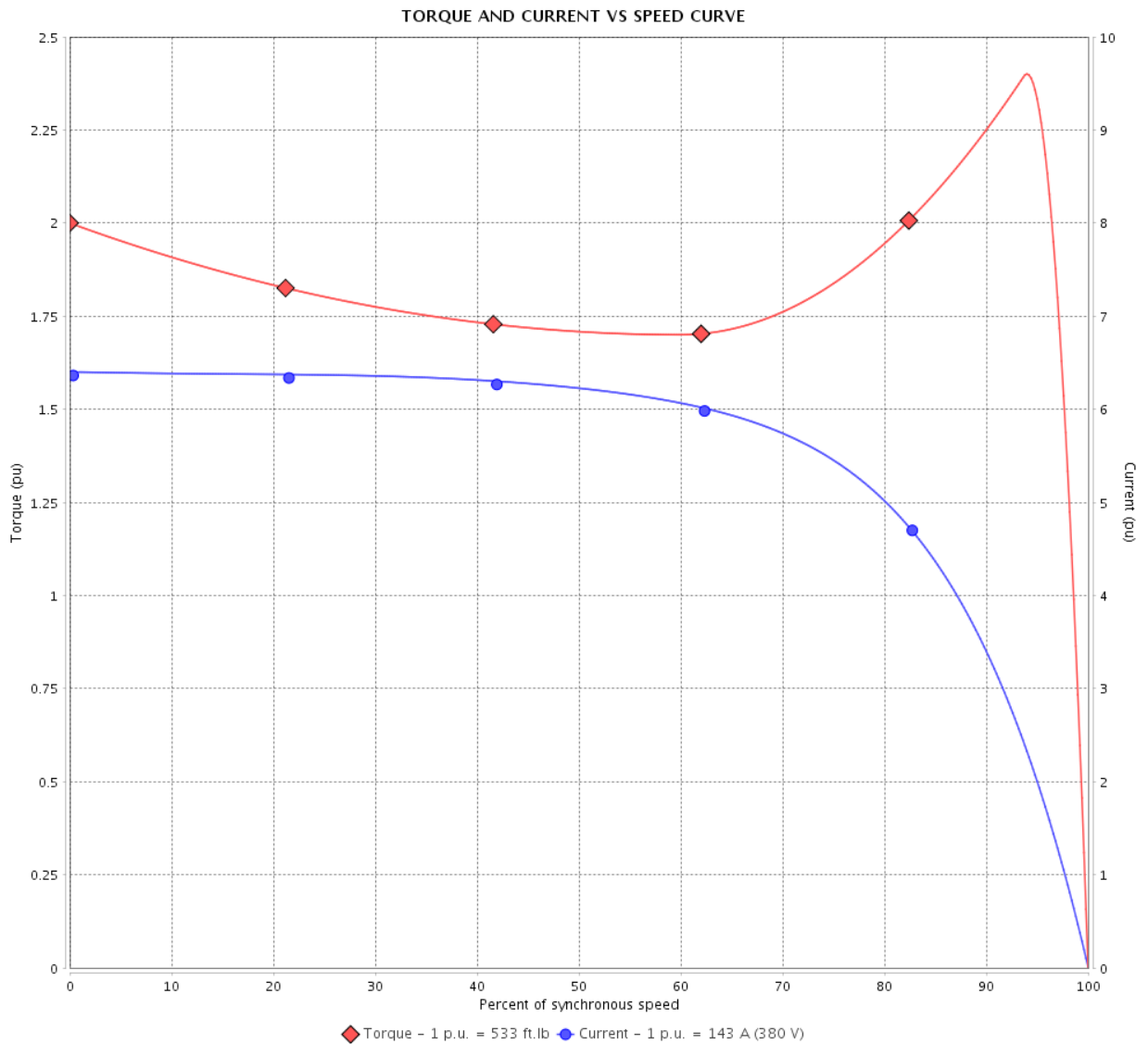
Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 13273087

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Performance : 380 V 50 Hz 6P IE3

Rated current	: 143 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 533 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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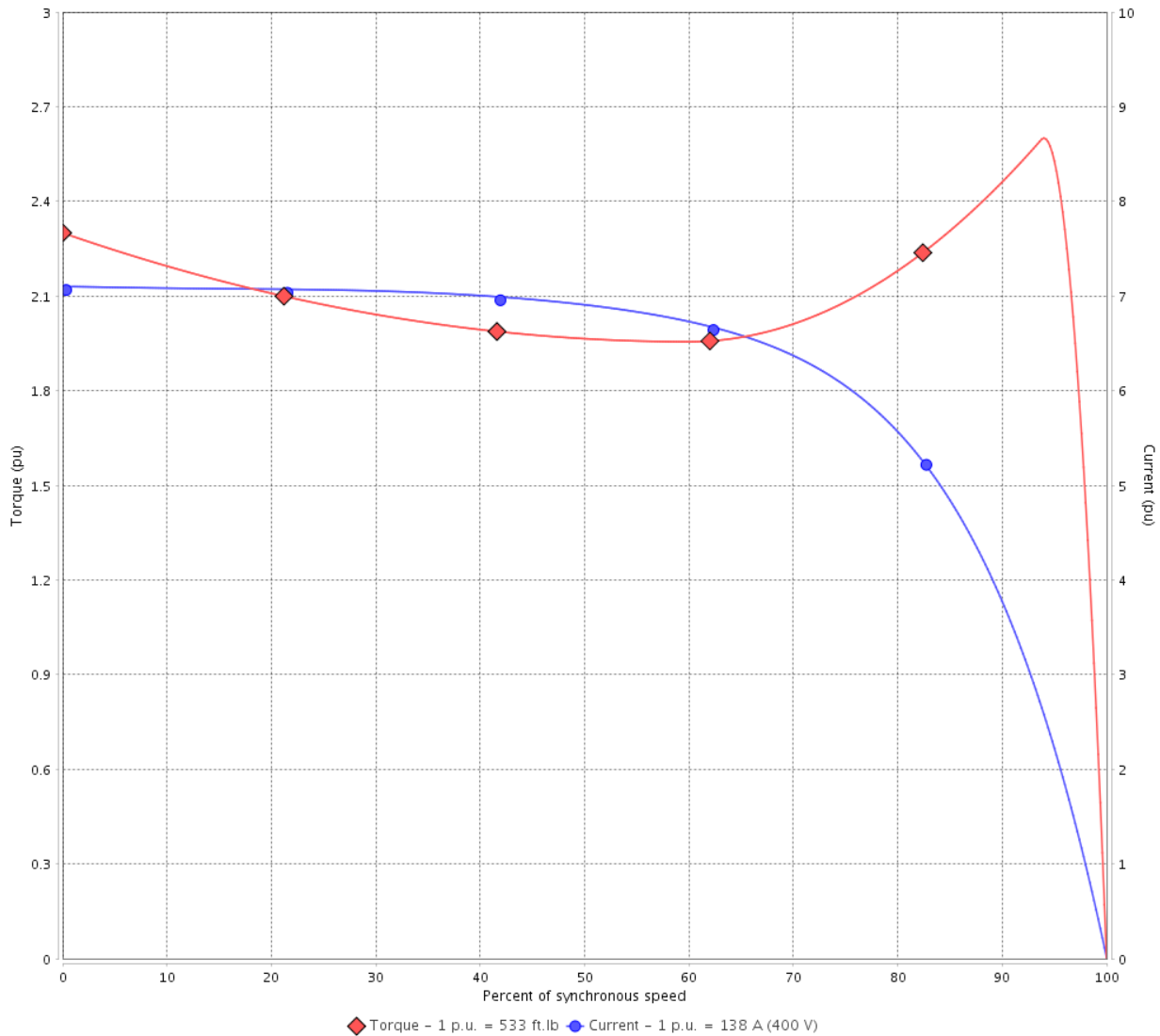
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 138 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 533 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



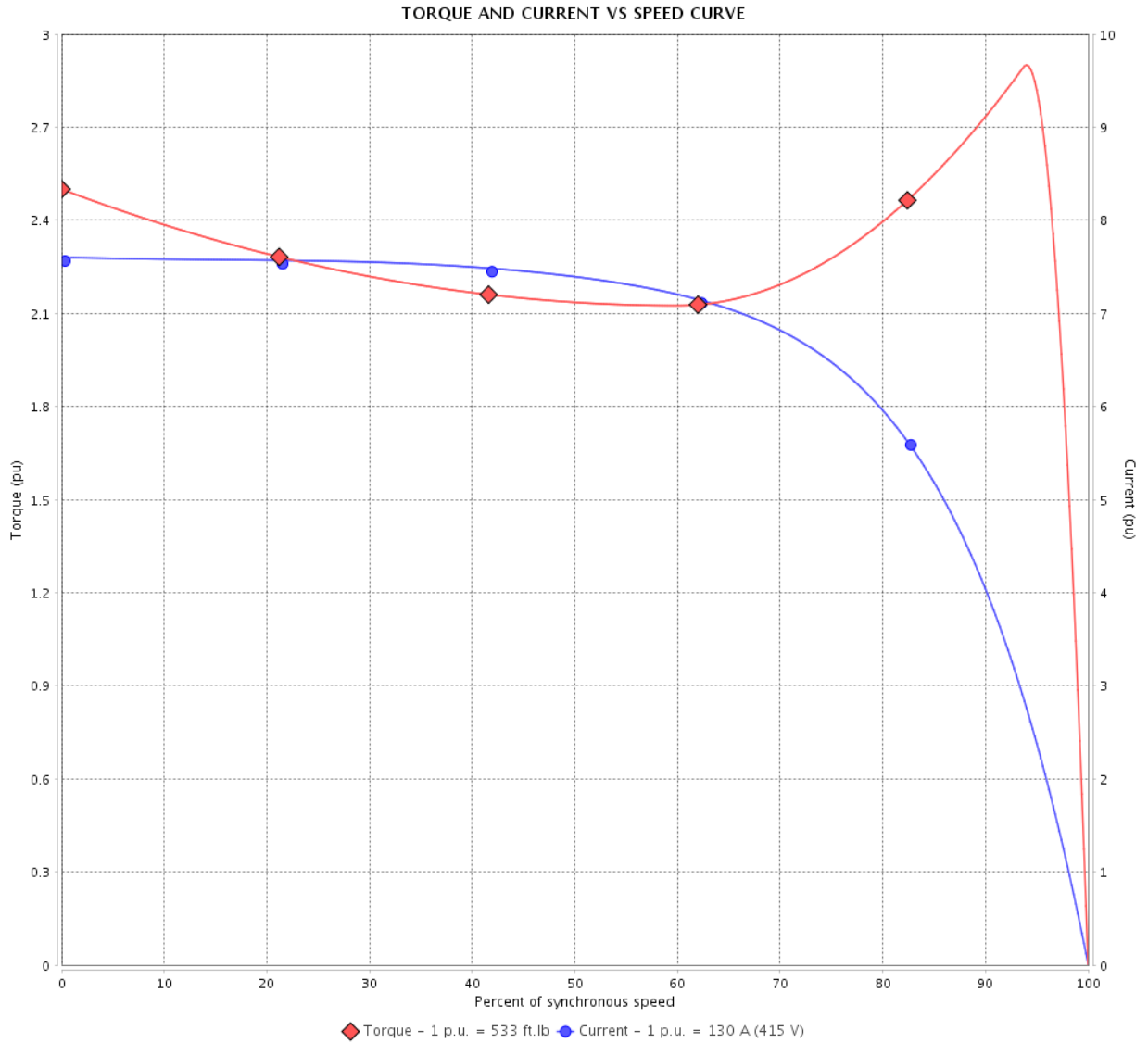
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Customer :

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Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 415 V 50 Hz 6P IE3

Rated current	: 130 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 533 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



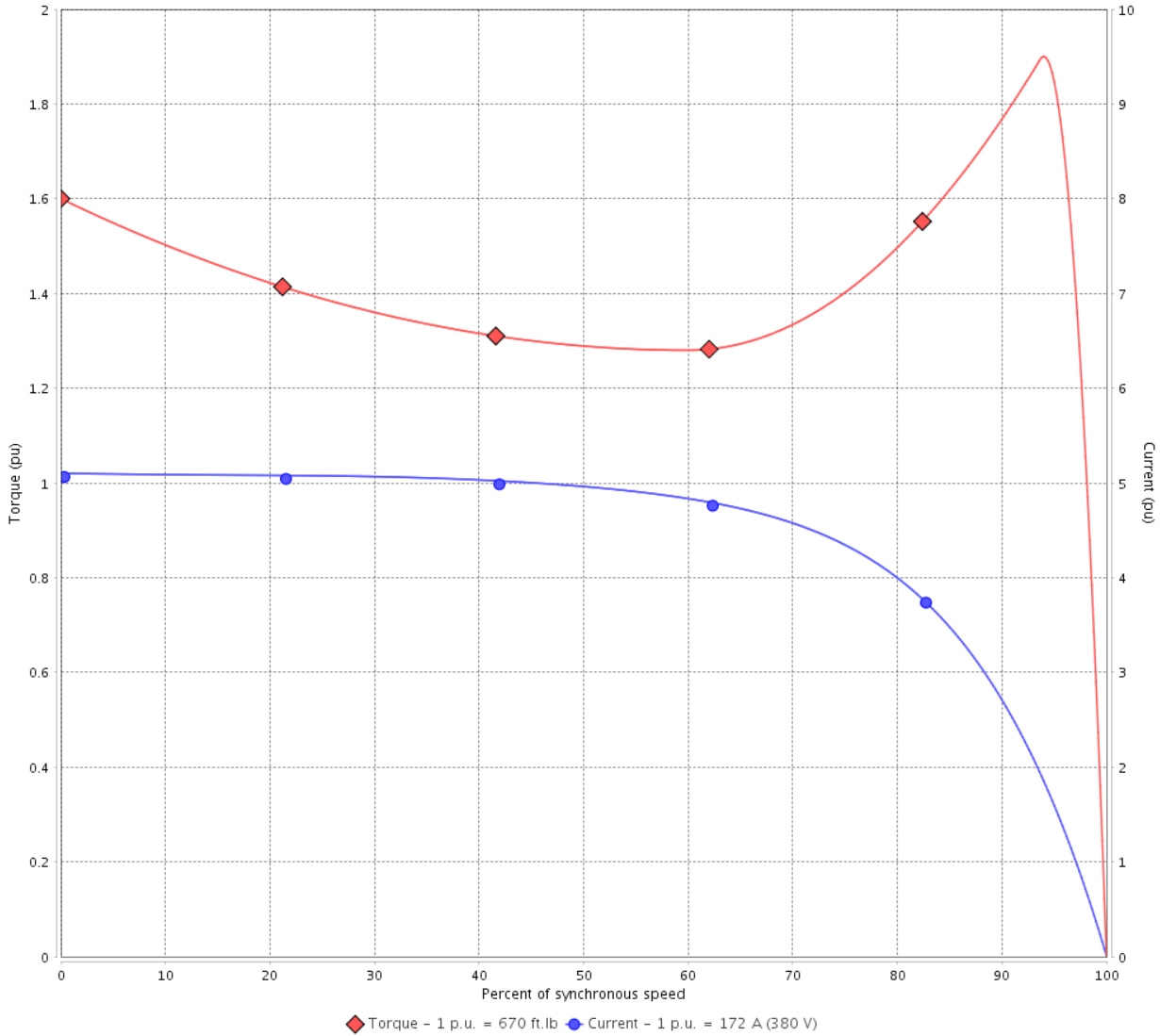
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Product code : 13273087

Catalog # : 12512ET3E445T-W22G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current	: 172 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 670 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



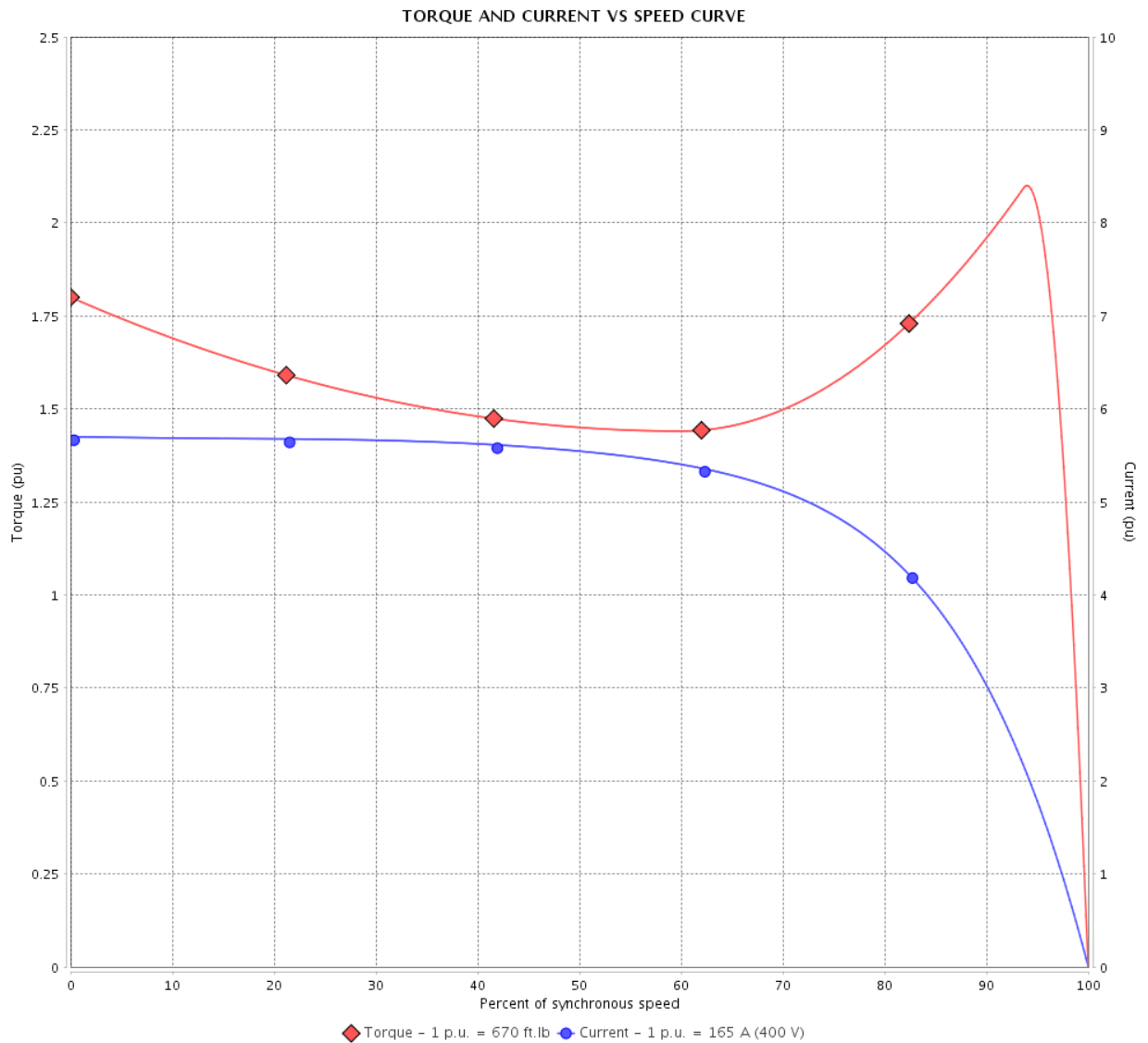
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Catalog # : 12512ET3E445T-W22G



Performance : 400 V 50 Hz 6P IE1

Rated current	: 165 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 670 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



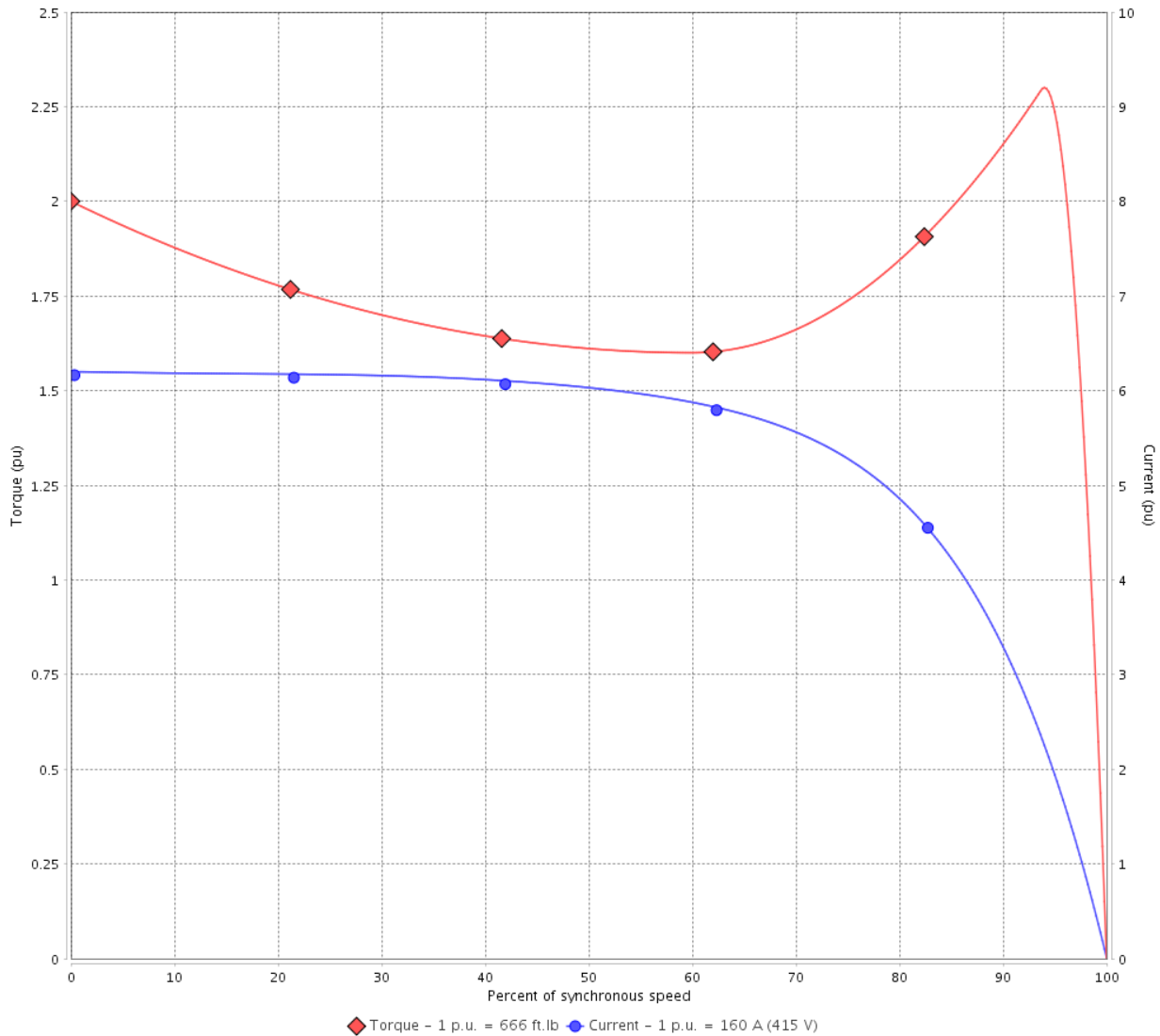
Customer :

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Catalog # : 12512ET3E445T-W22G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 160 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 666 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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Three Phase Induction Motor - Squirrel Cage

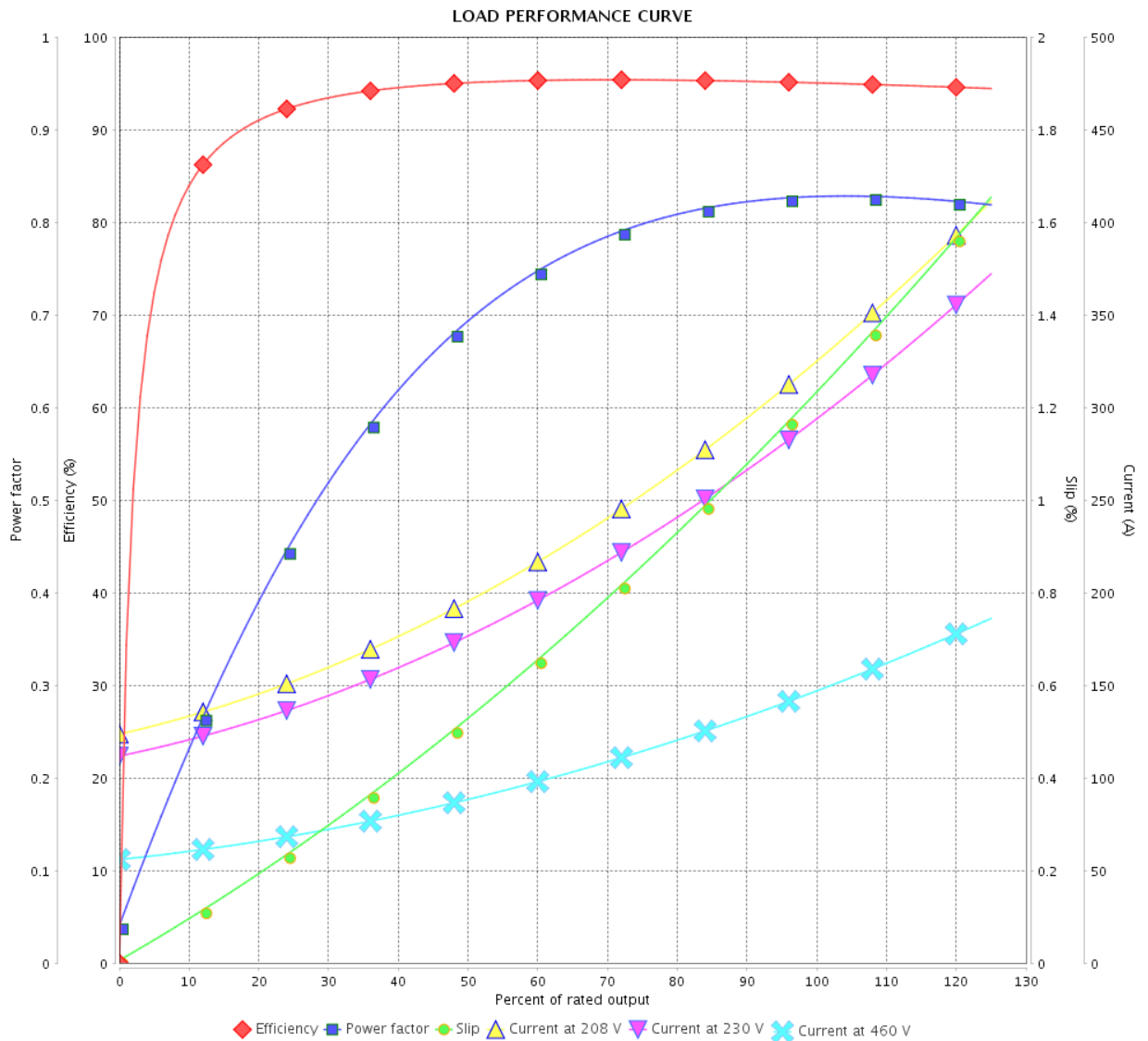


Customer :

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Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 230/460 V 60 Hz 6P

Rated current : 286/143 A
 LRC : 6.4
 Rated torque : 554 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 240 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

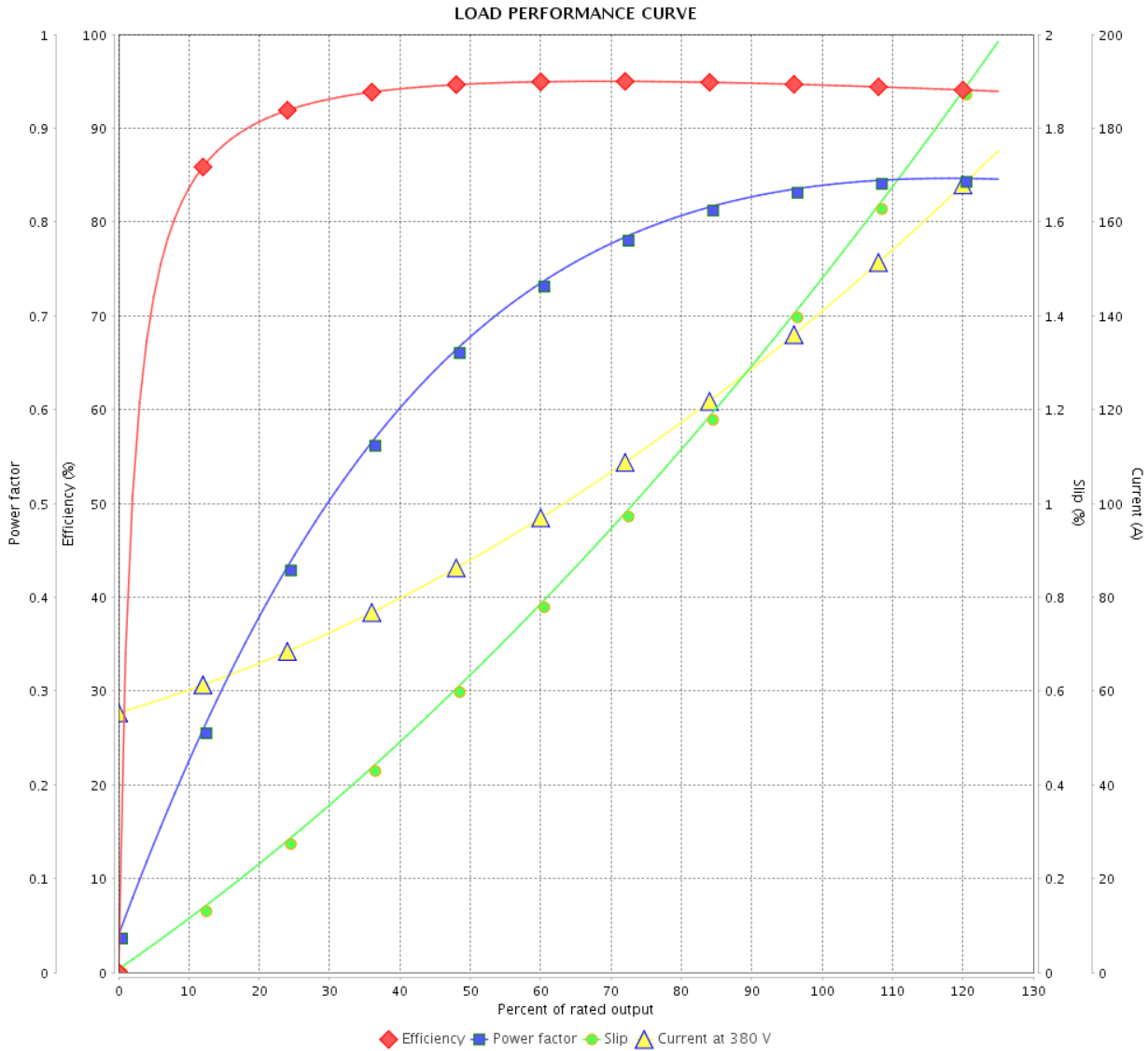


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Performance : 380 V 50 Hz 6P IE3

Rated current	: 143 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 533 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

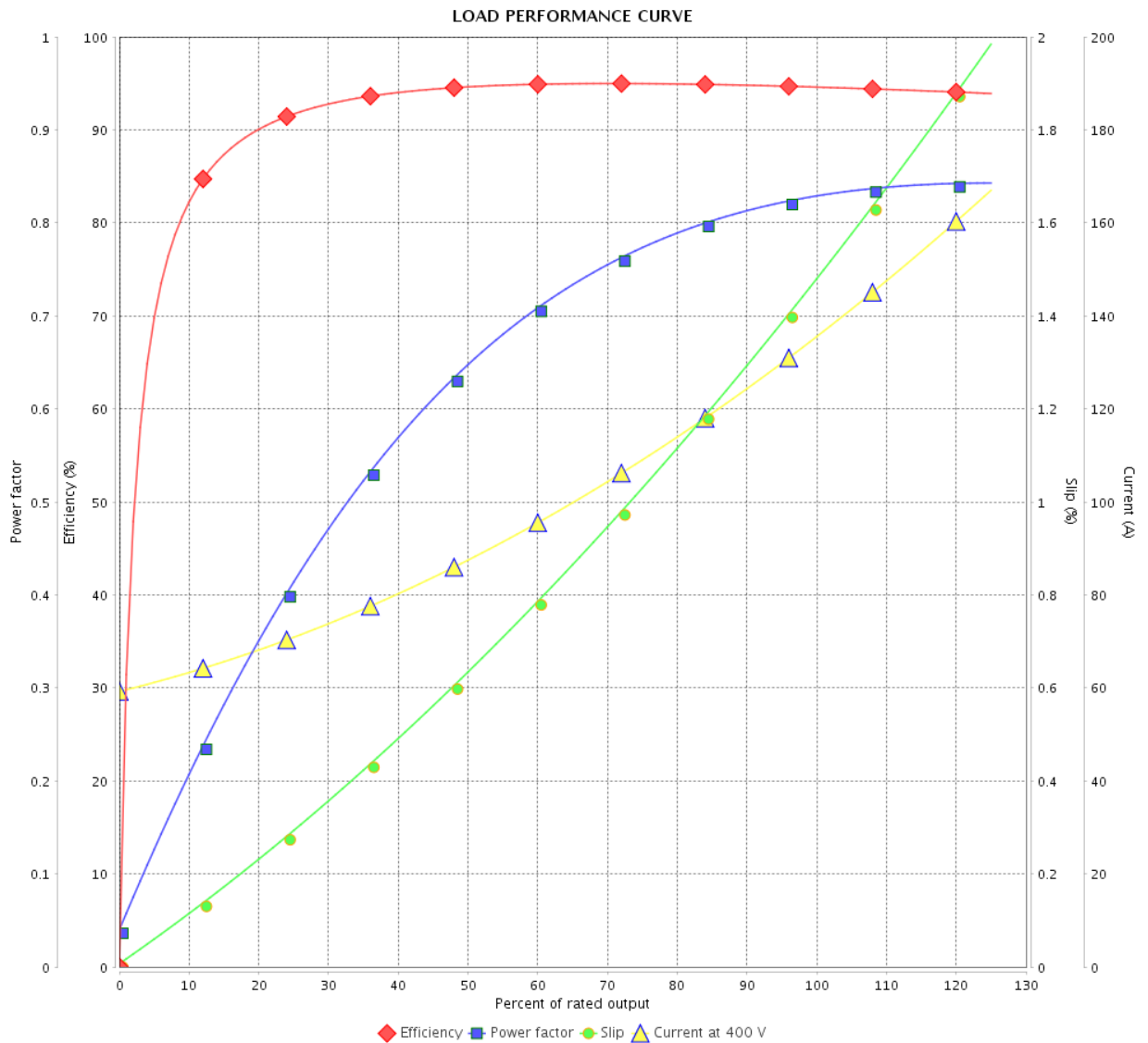


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Performance : 400 V 50 Hz 6P IE3

Rated current : 138 A
 LRC : 7.1
 Rated torque : 533 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 260 %
 Rated speed : 985 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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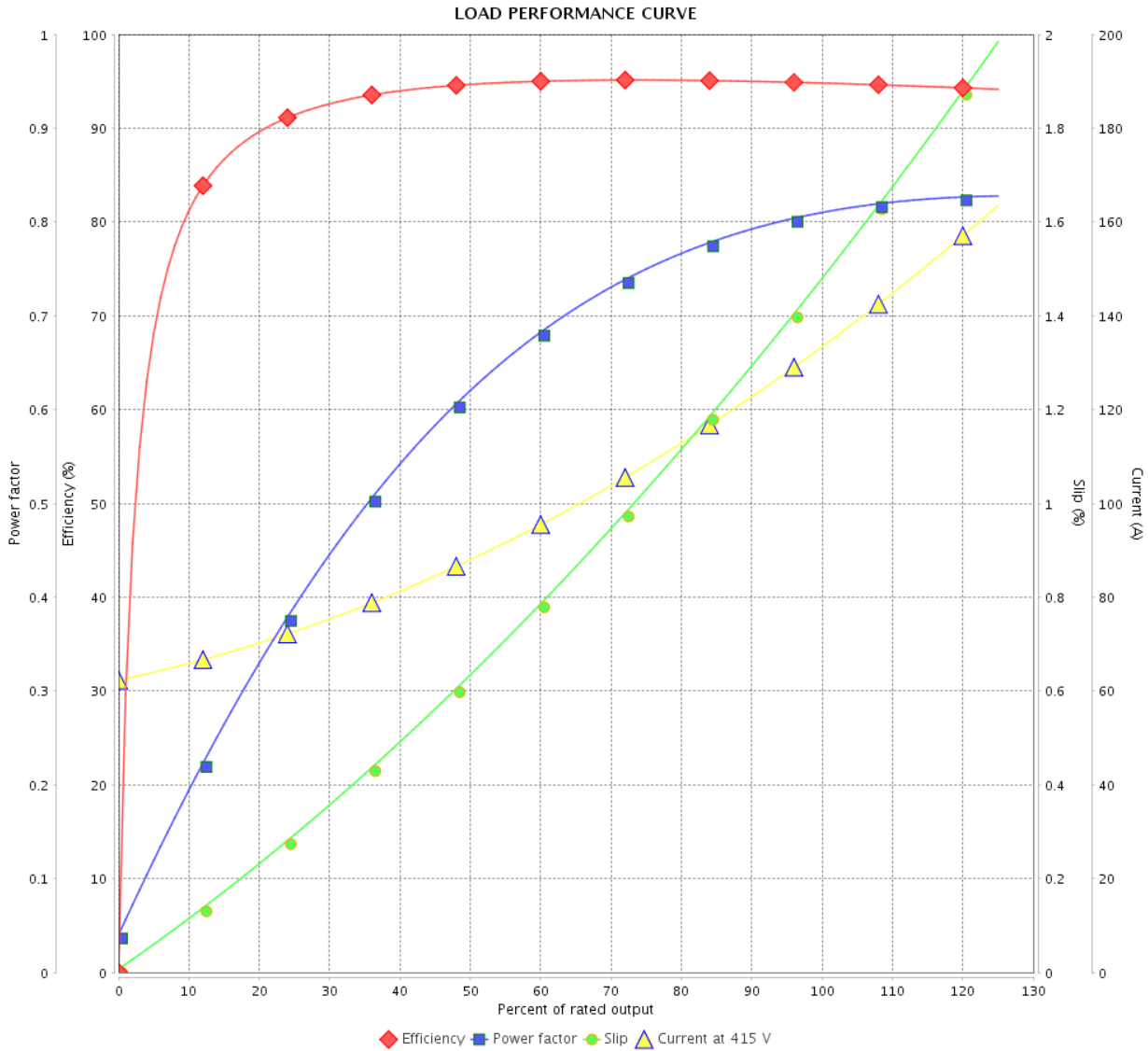


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Performance : 415 V 50 Hz 6P IE3

Rated current : 130 A
 LRC : 7.6
 Rated torque : 533 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 985 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

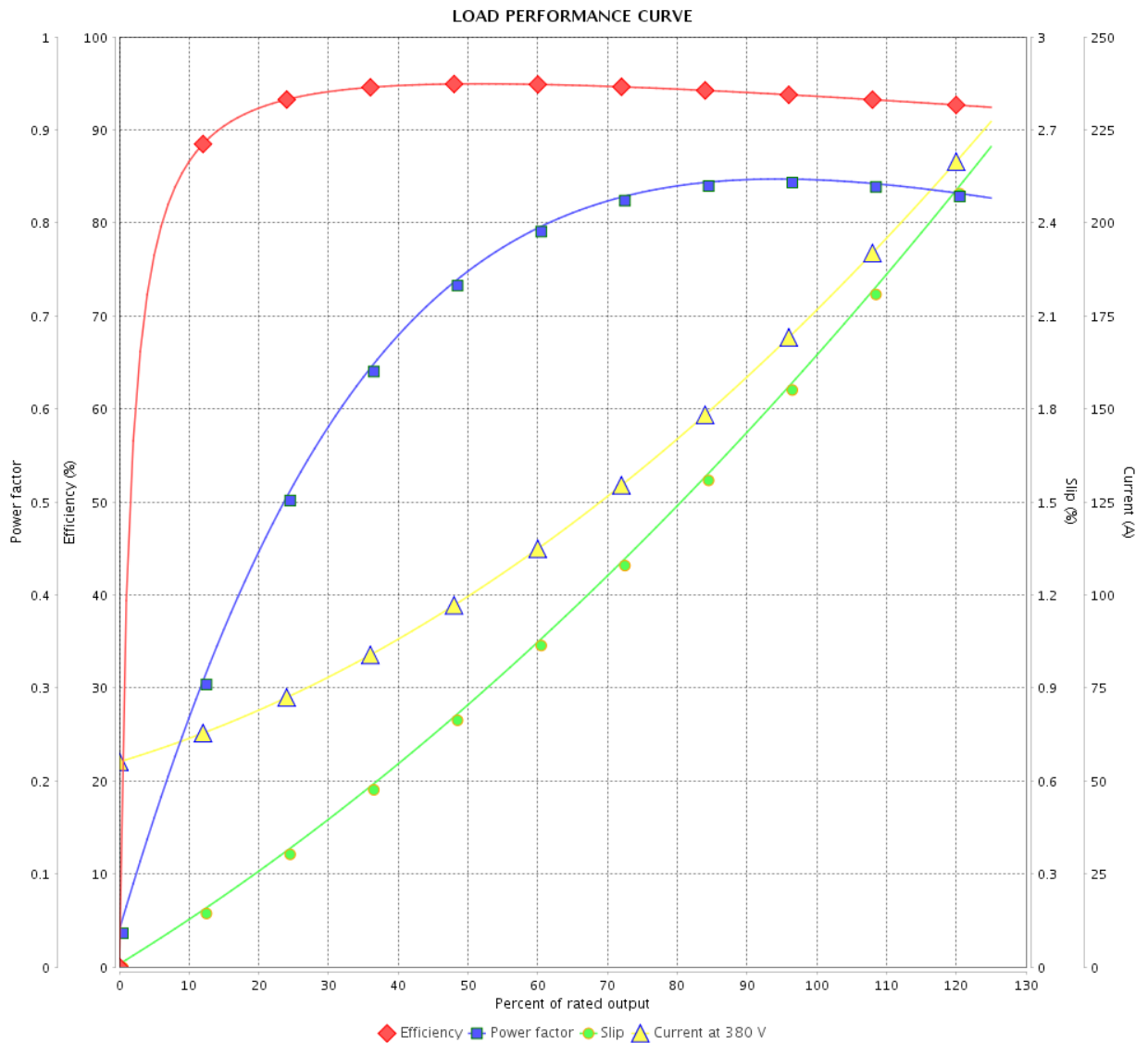


Customer :

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Catalog # : 12512ET3E445T-W22G



Performance : 380 V 50 Hz 6P IE1

Rated current : 172 A
 LRC : 5.1
 Rated torque : 670 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 190 %
 Rated speed : 980 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



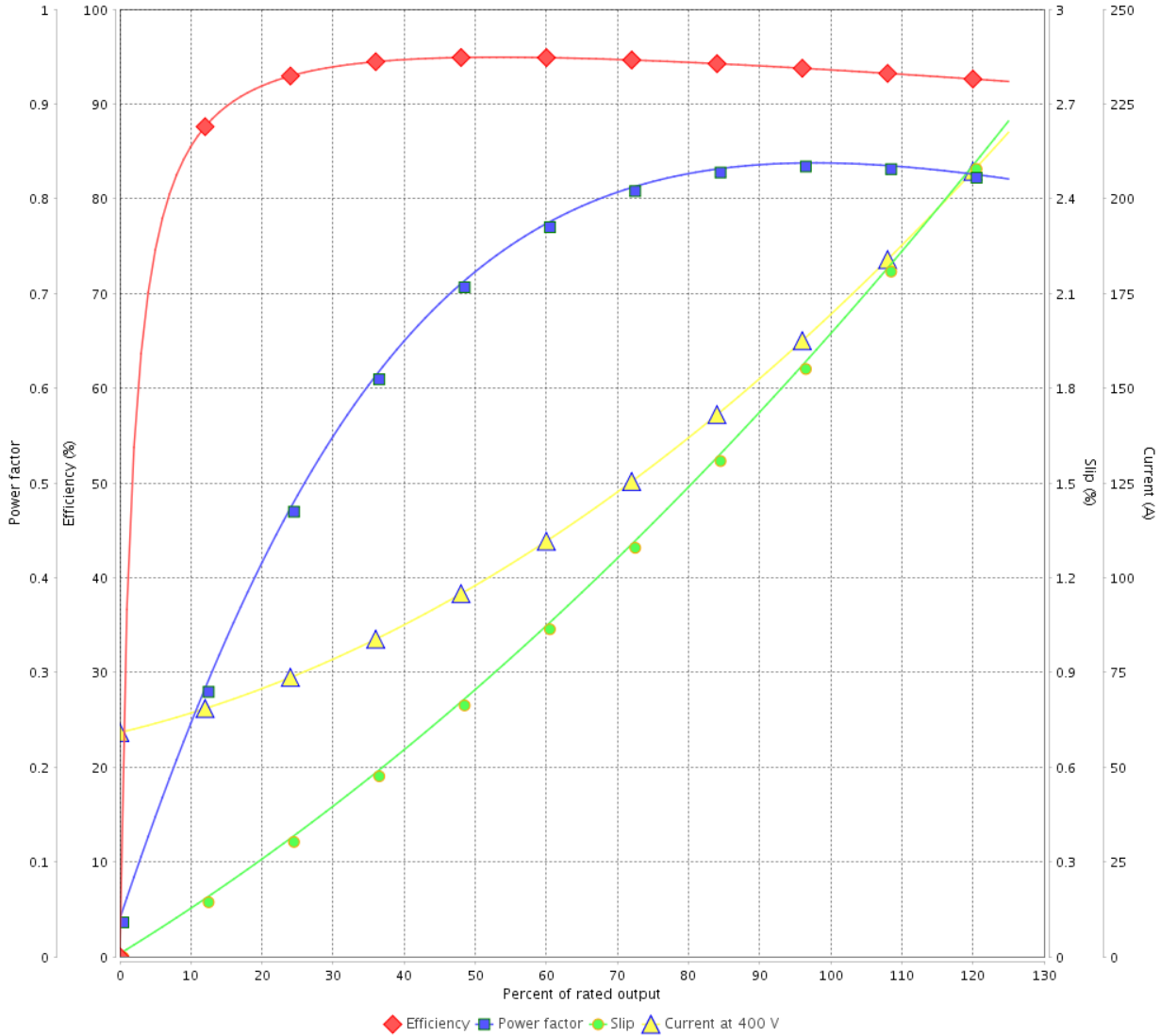
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Performance : 400 V 50 Hz 6P IE1

Rated current : 165 A
 LRC : 5.7
 Rated torque : 670 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 210 %
 Rated speed : 980 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

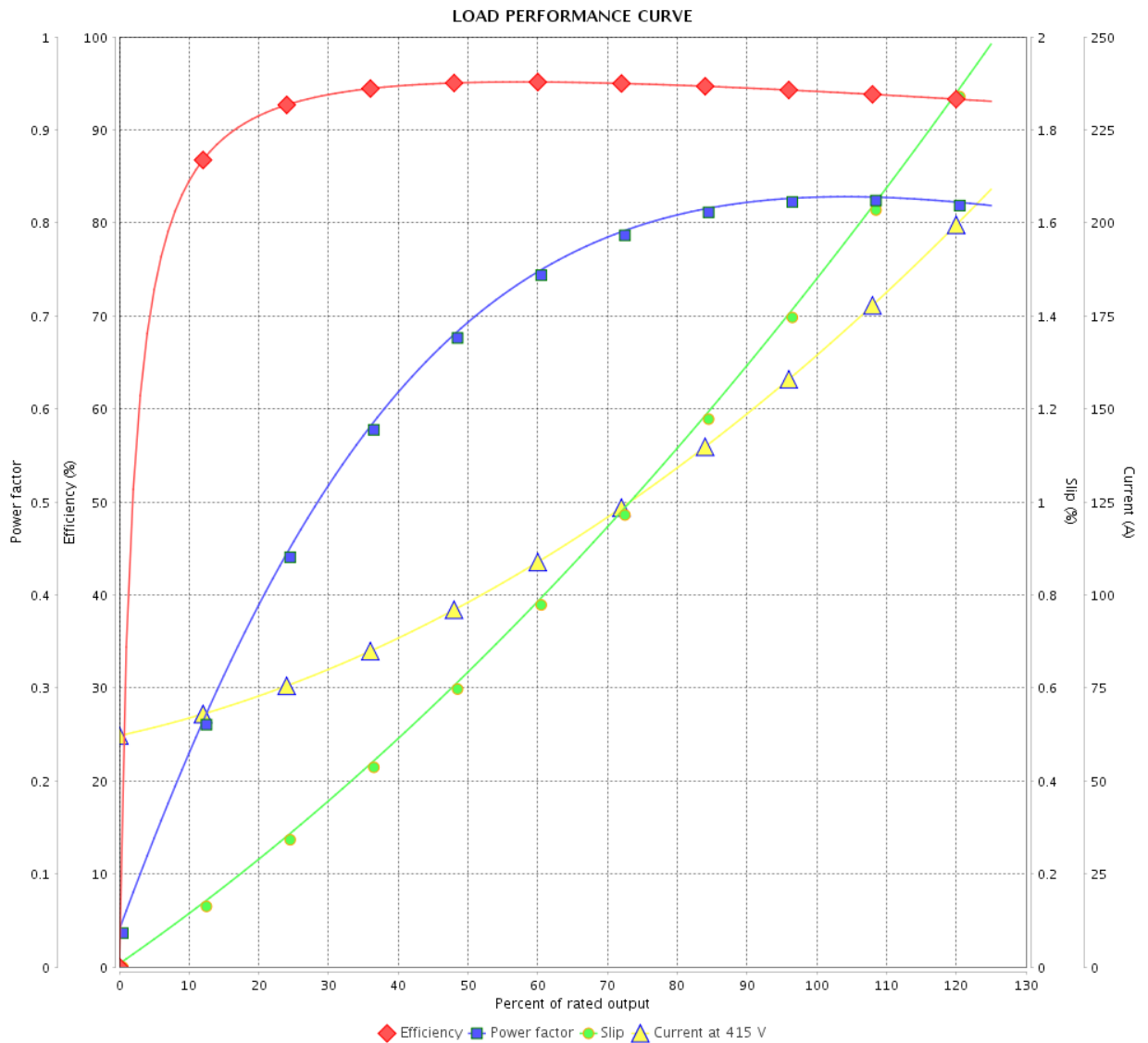


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Product line : NEMA Premium Efficiency Three-Phase

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Performance : 415 V 50 Hz 6P IE2

Rated current : 160 A
 LRC : 6.2
 Rated torque : 666 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 985 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE

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Customer :

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Performance : 230/460 V 60 Hz 6P

Rated current	: 286/143 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 554 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Heating constant

Cooling constant

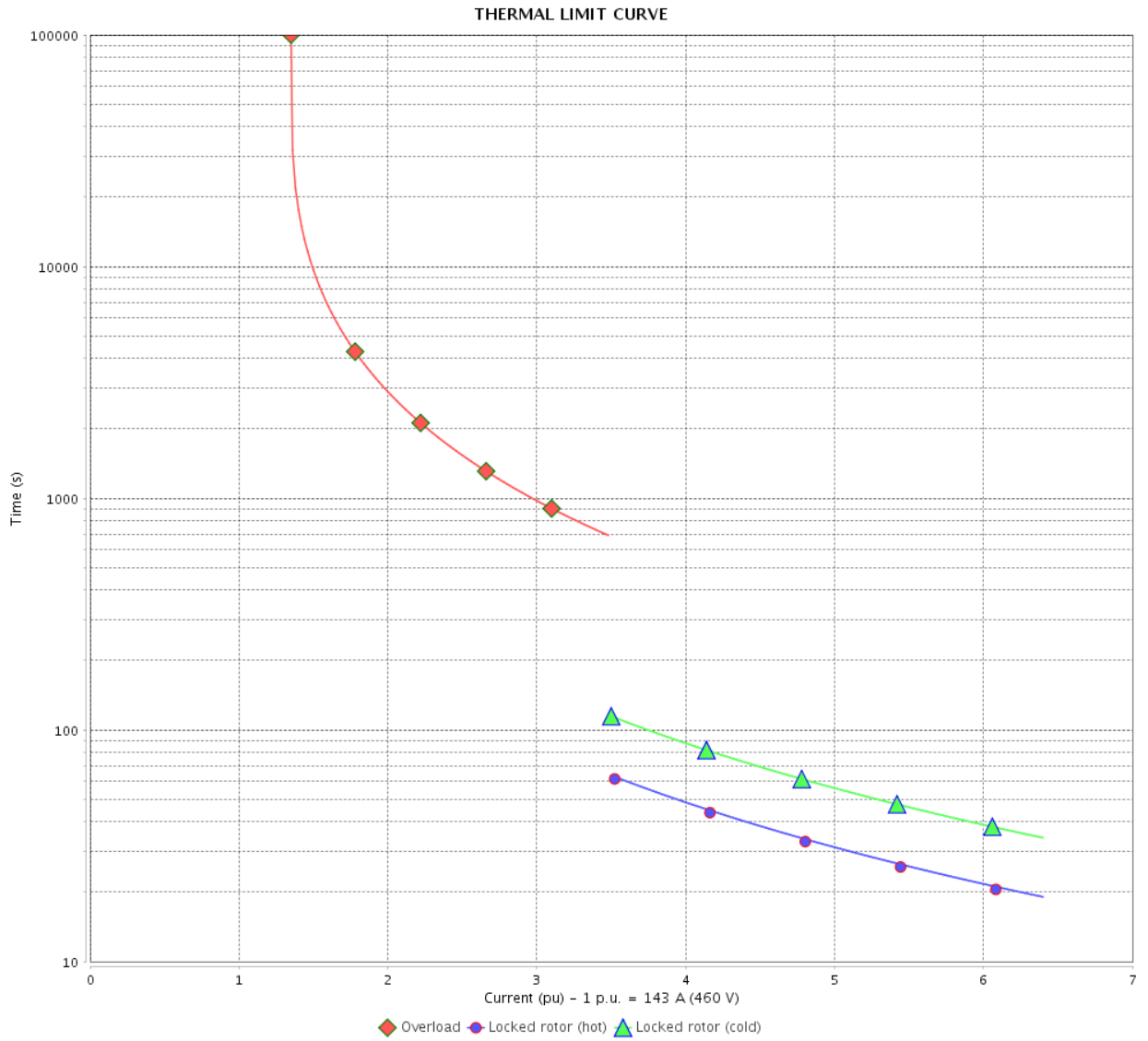
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performance : 380 V 50 Hz 6P IE3

Rated current	: 143 A	Moment of inertia (J)	: 104 sq.ft.lb
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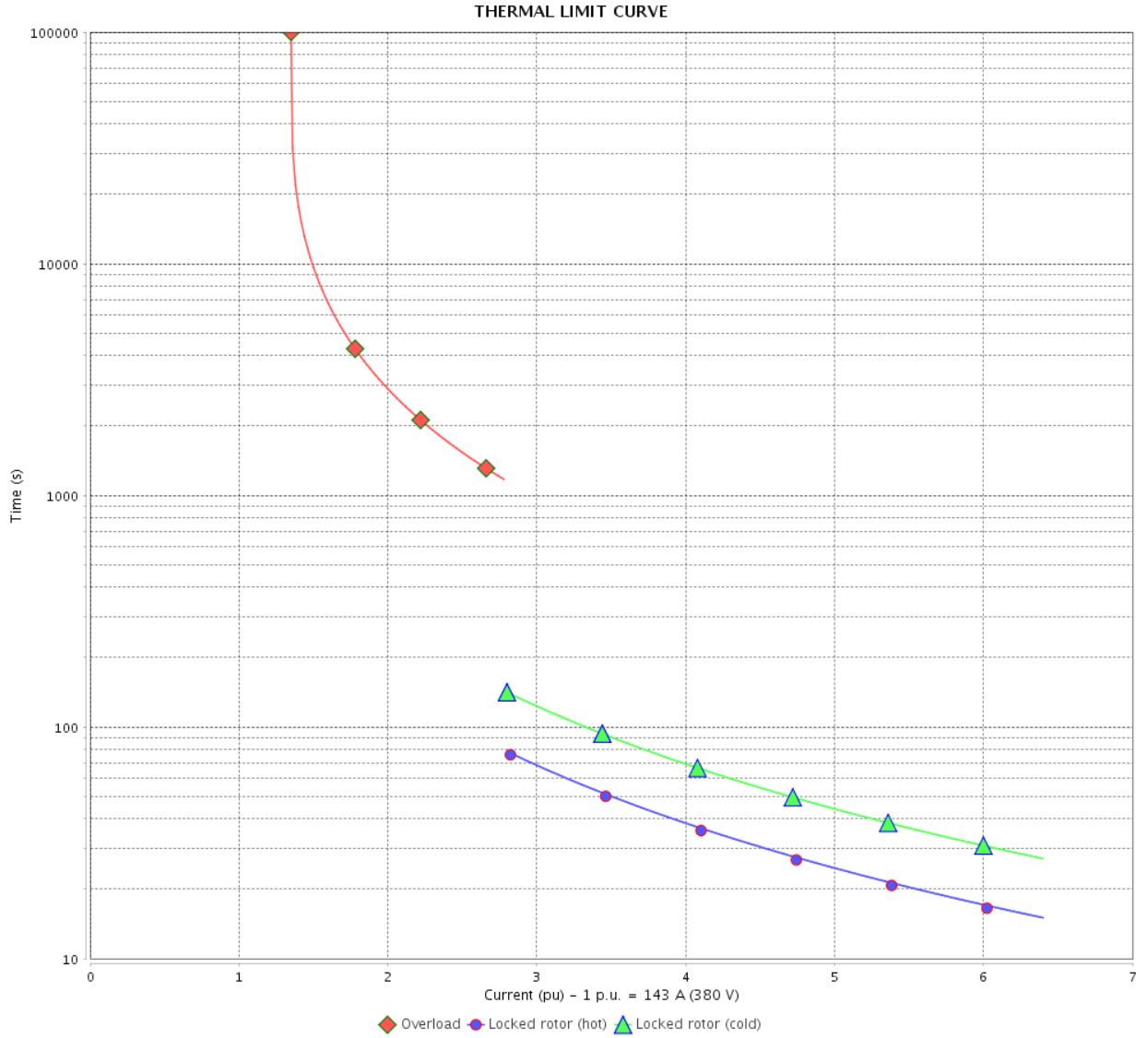
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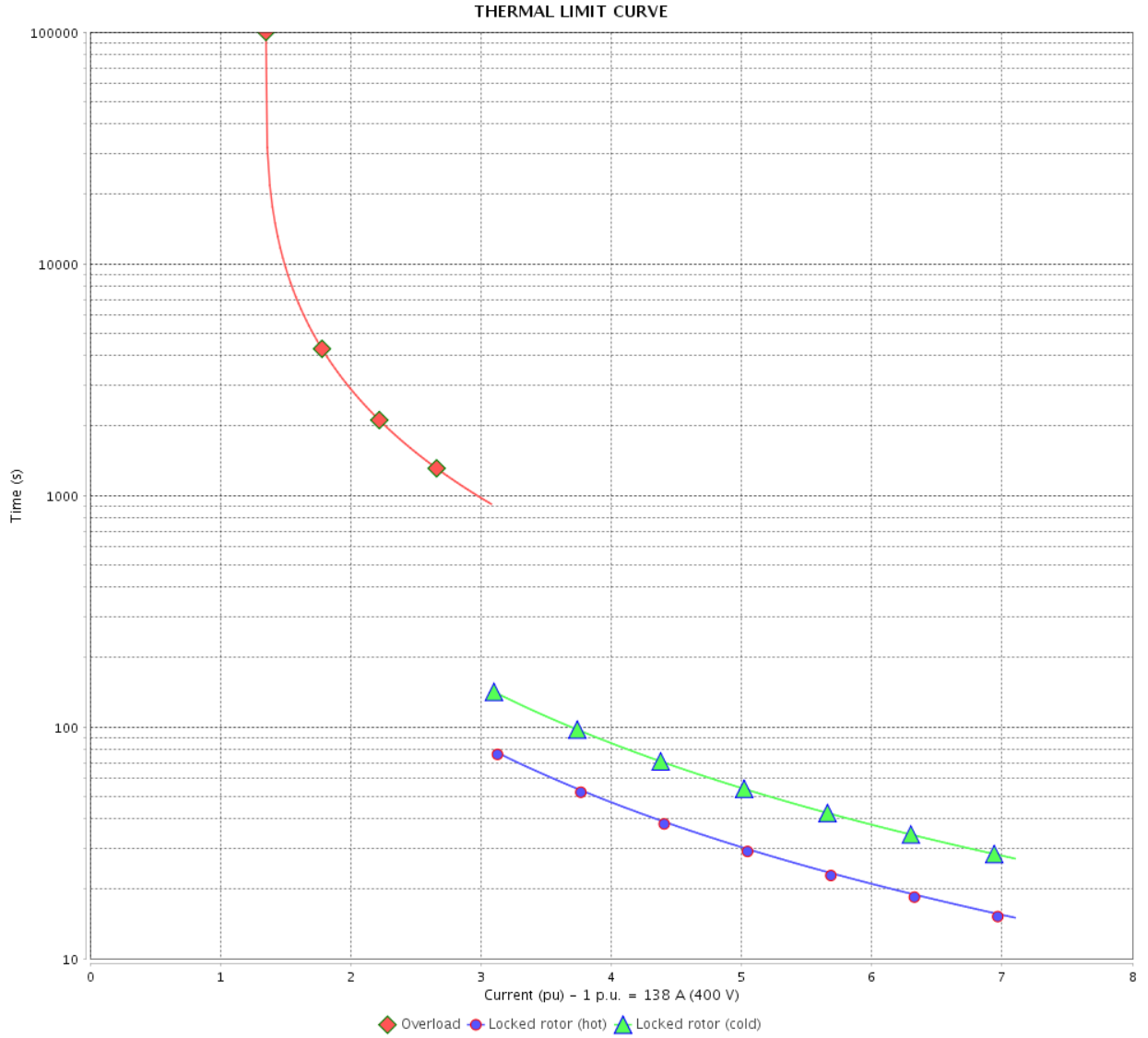
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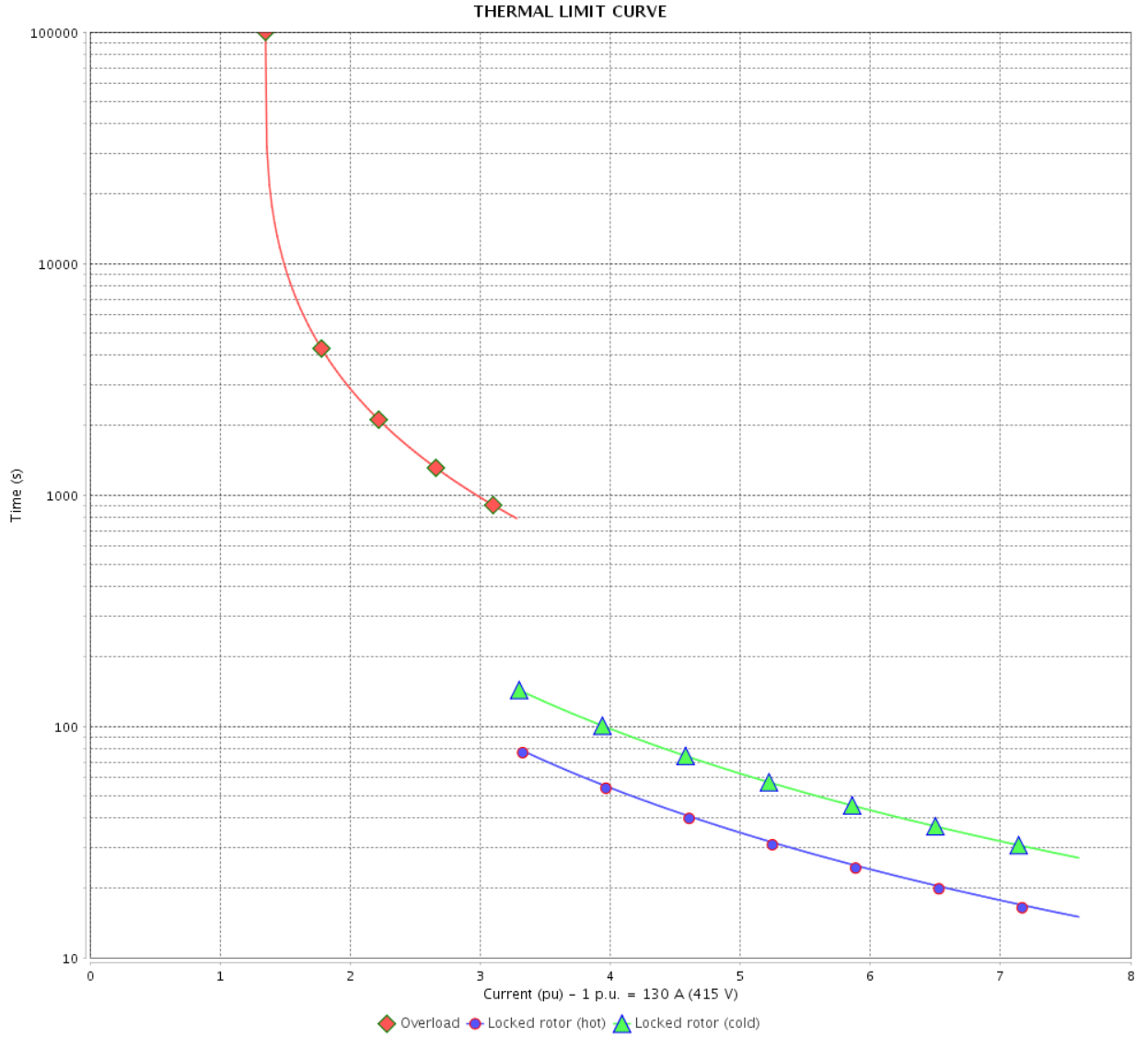
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Performance : 380 V 50 Hz 6P IE1

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Rated speed : 980 rpm	Design : B

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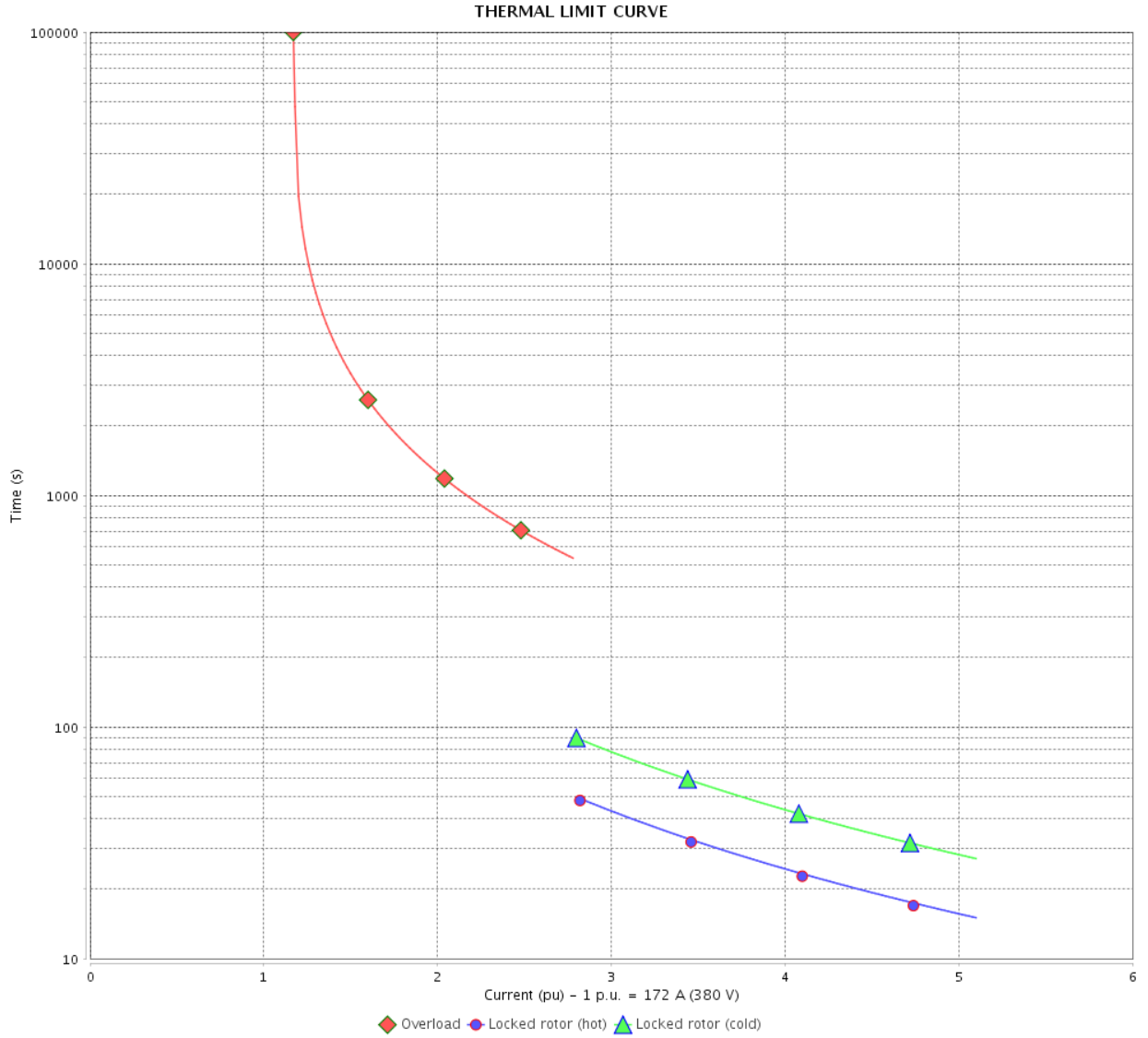
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Performance : 400 V 50 Hz 6P IE1

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Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
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Cooling constant

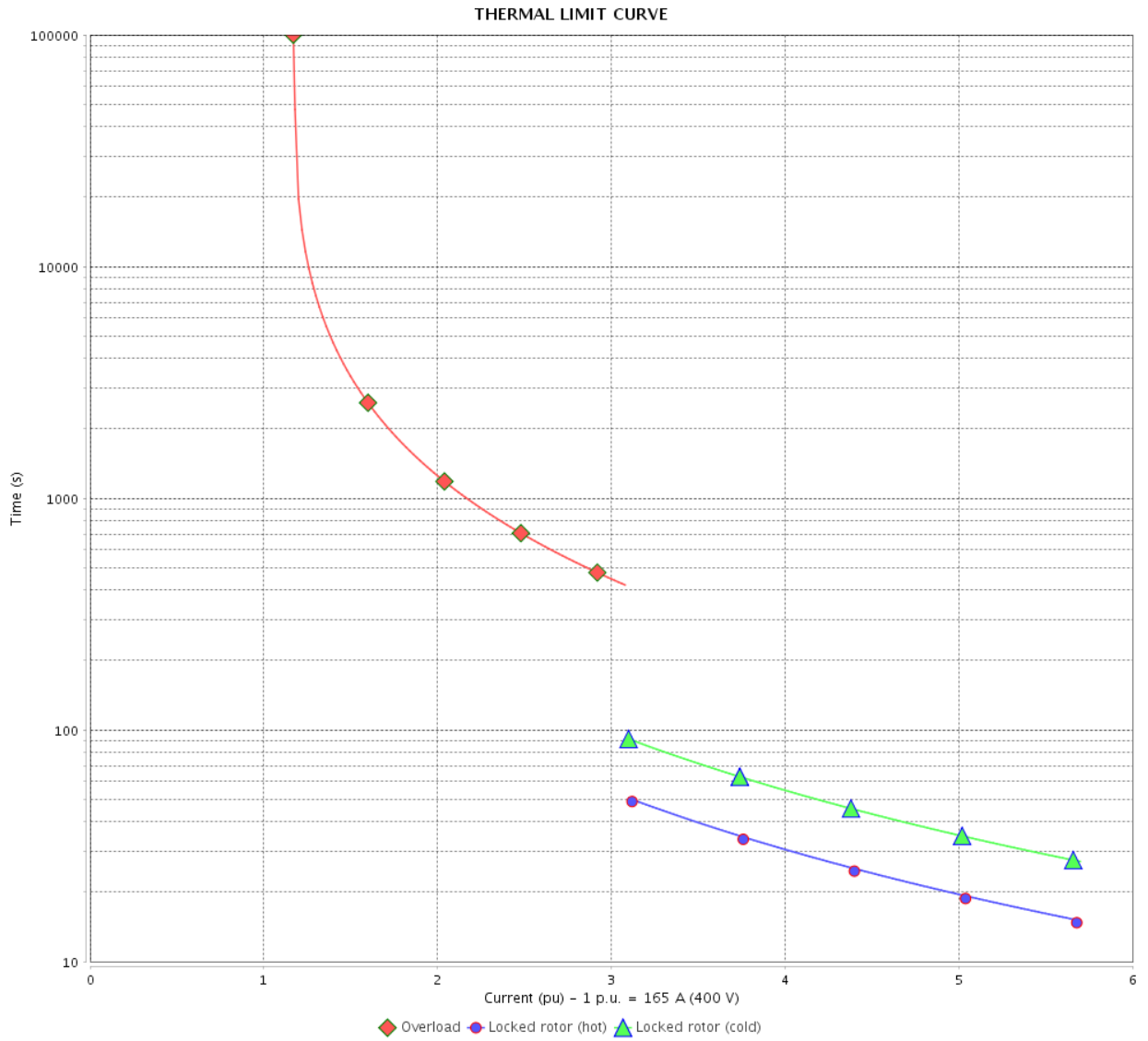
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		26 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 27 / 36		Revision
Checked by				
Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 13273087
Catalog # : 12512ET3E445T-W22G

Performance : 415 V 50 Hz 6P IE2

Rated current	: 160 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 666 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

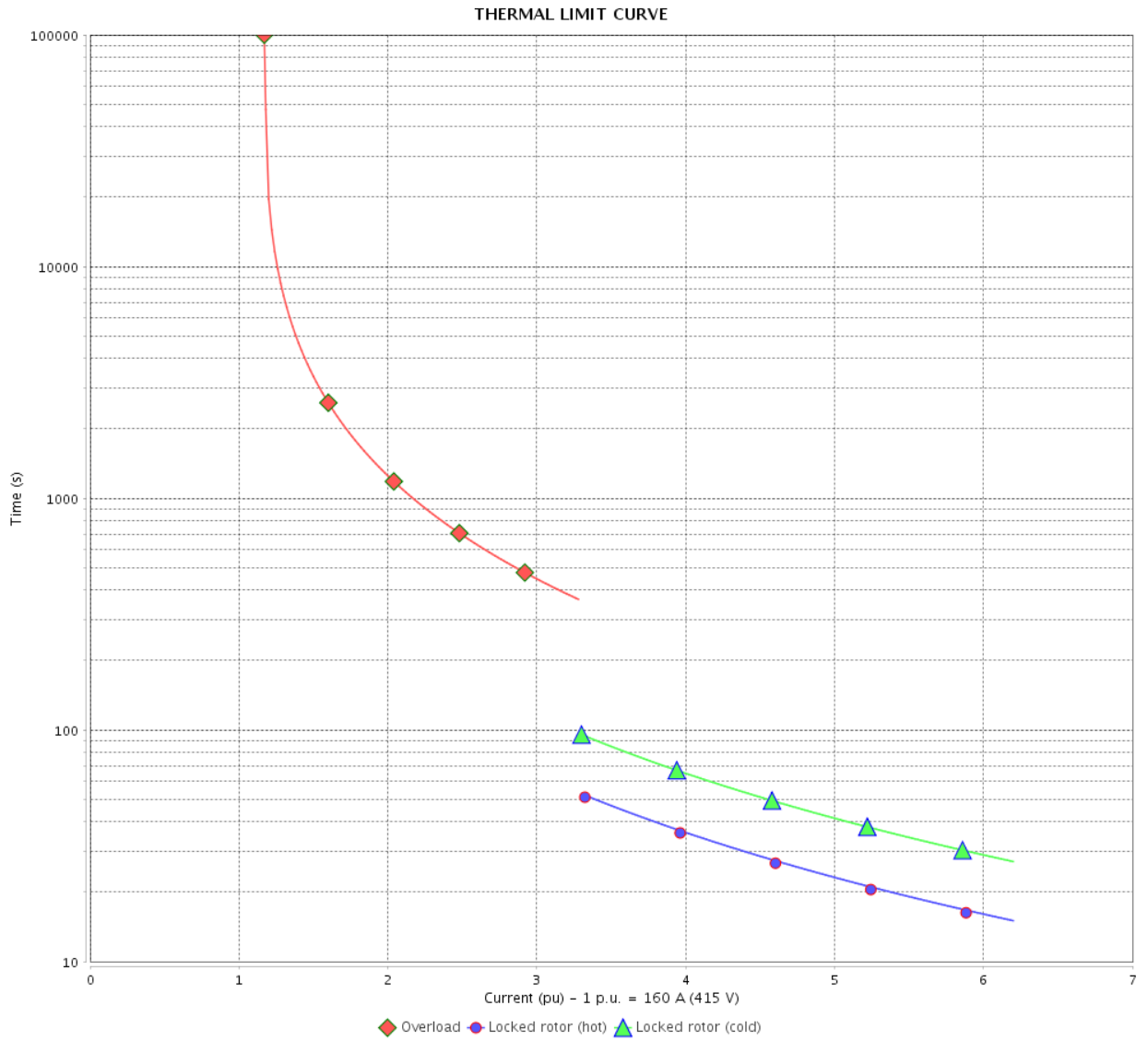
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performed by		Page		Revision
Checked by		29 / 36		
Date		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

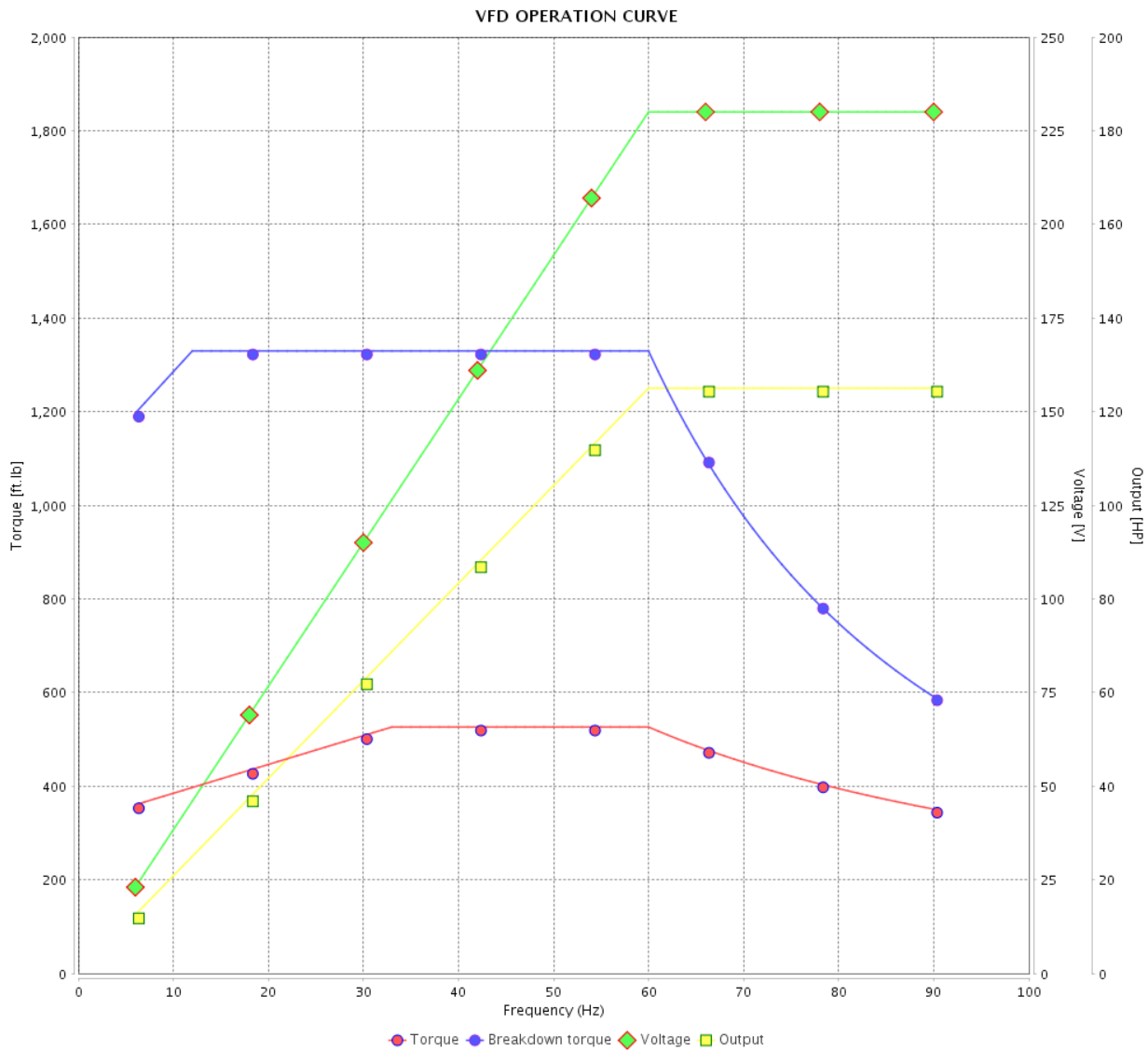


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 230/460 V 60 Hz 6P

Rated current : 286/143 A
 LRC : 6.4
 Rated torque : 554 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 240 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

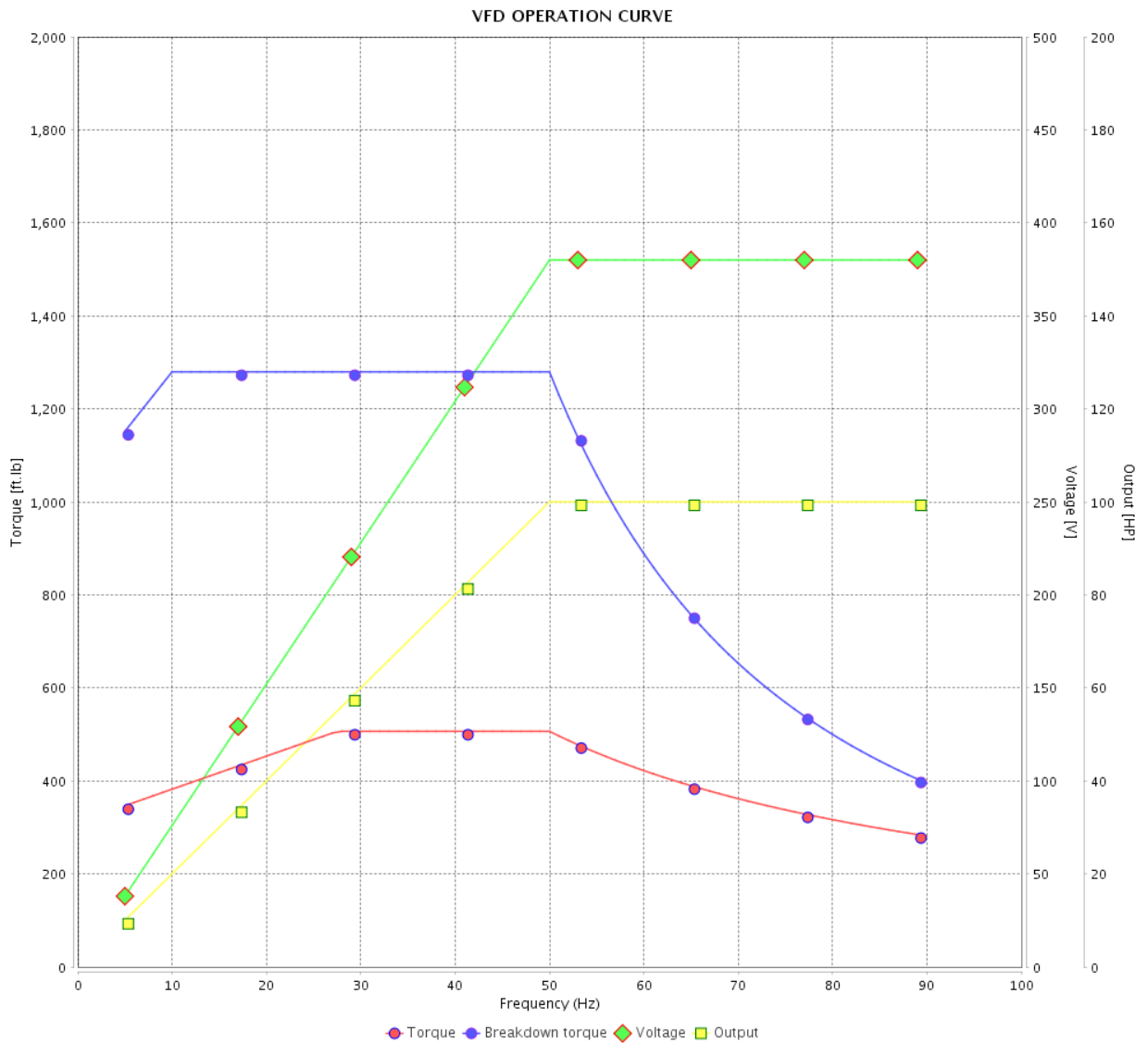


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 380 V 50 Hz 6P IE3

Rated current : 143 A
 LRC : 6.4
 Rated torque : 533 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 985 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



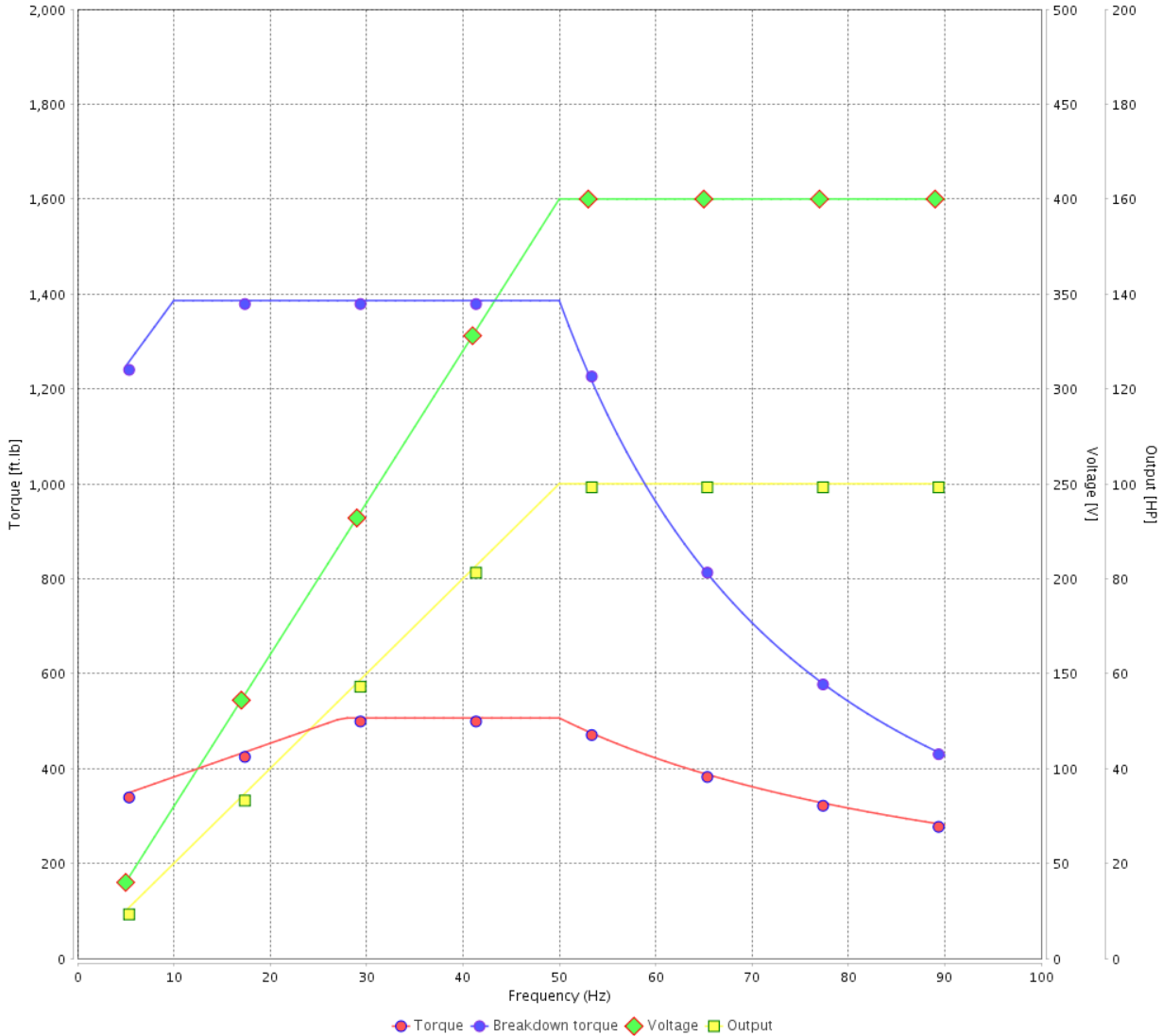
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 138 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 533 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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Performed by			Page 32 / 36	Revision
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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

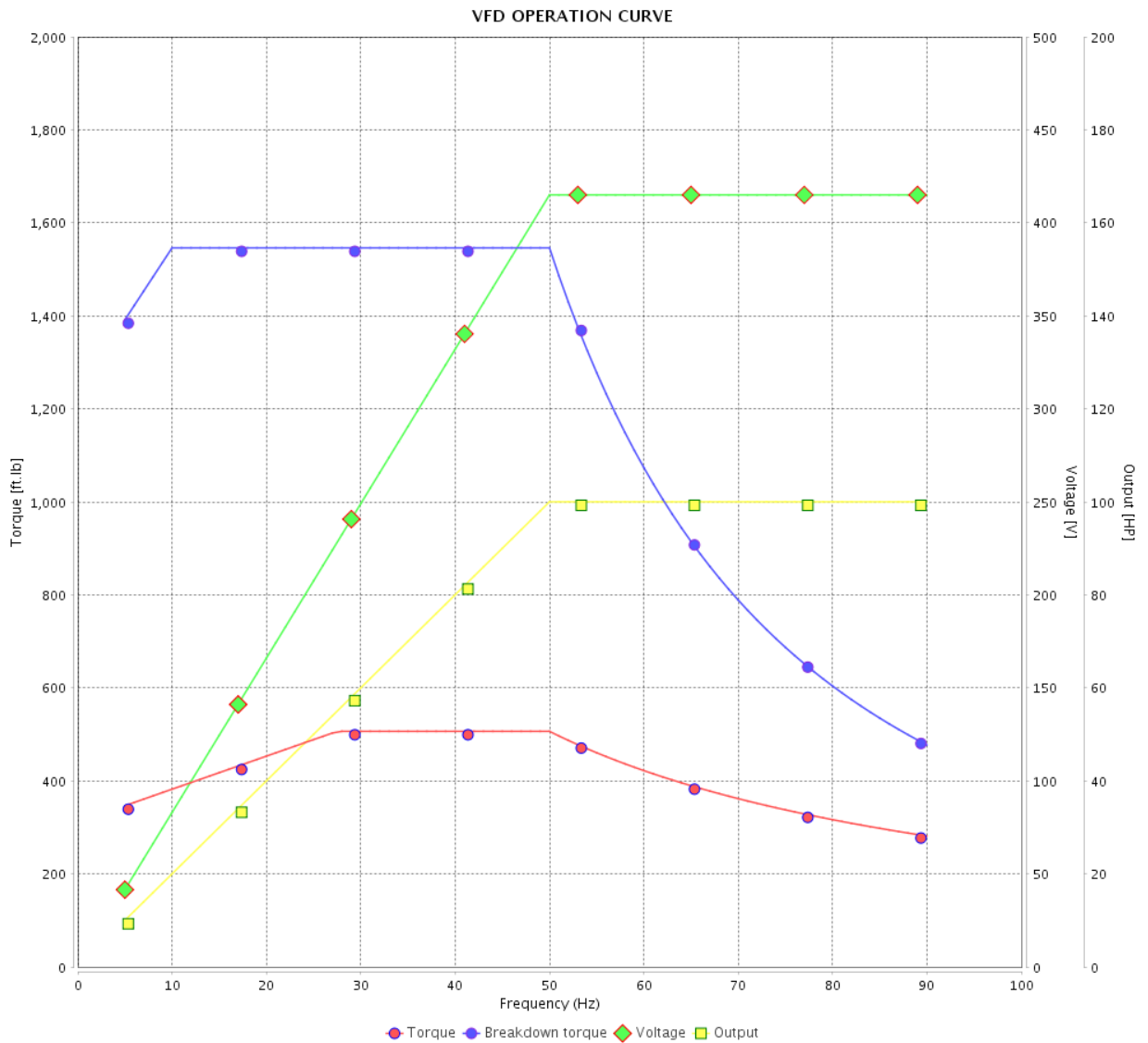


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 415 V 50 Hz 6P IE3

Rated current : 130 A
 LRC : 7.6
 Rated torque : 533 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 985 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



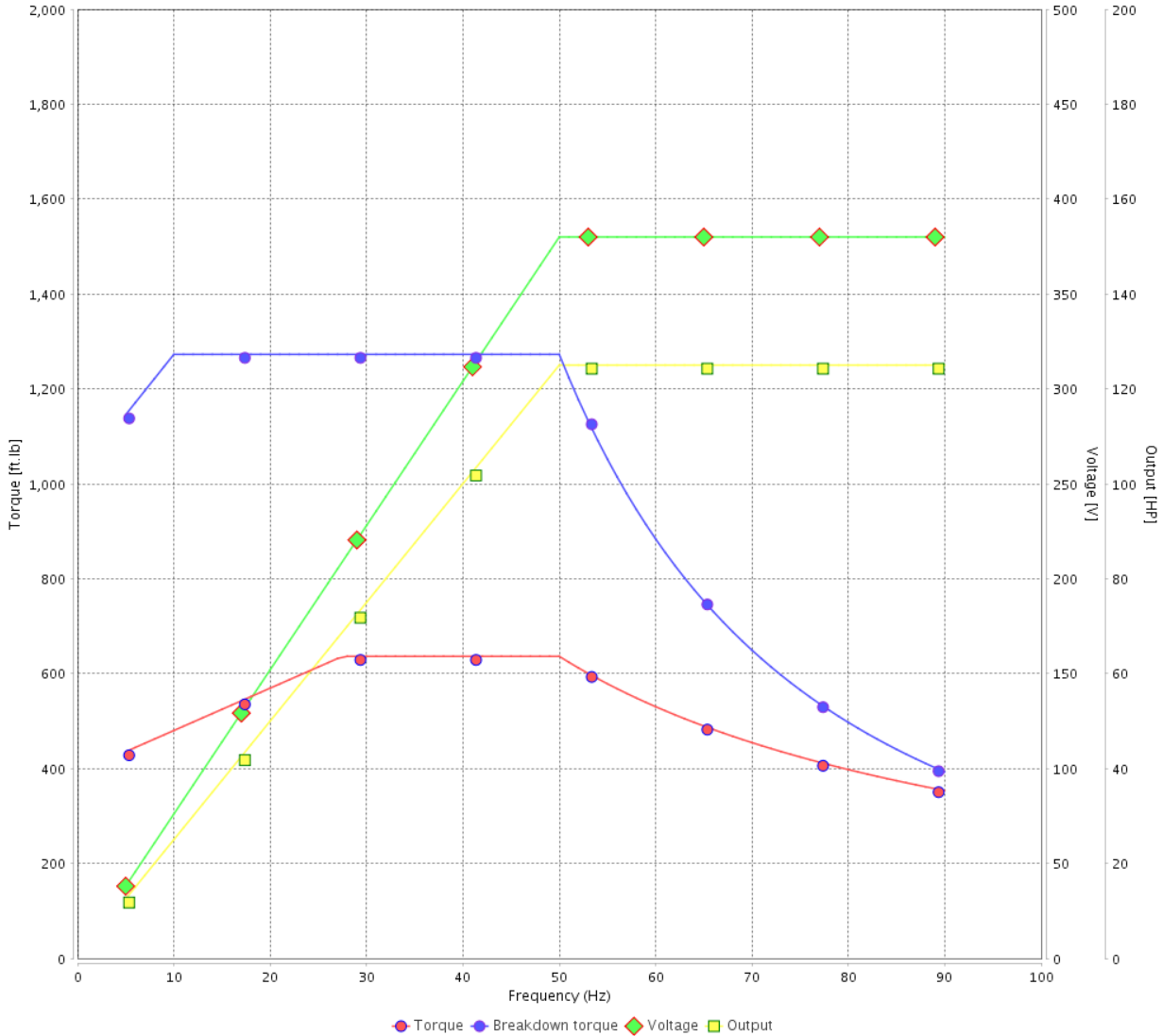
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current : 172 A
 LRC : 5.1
 Rated torque : 670 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 190 %
 Rated speed : 980 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

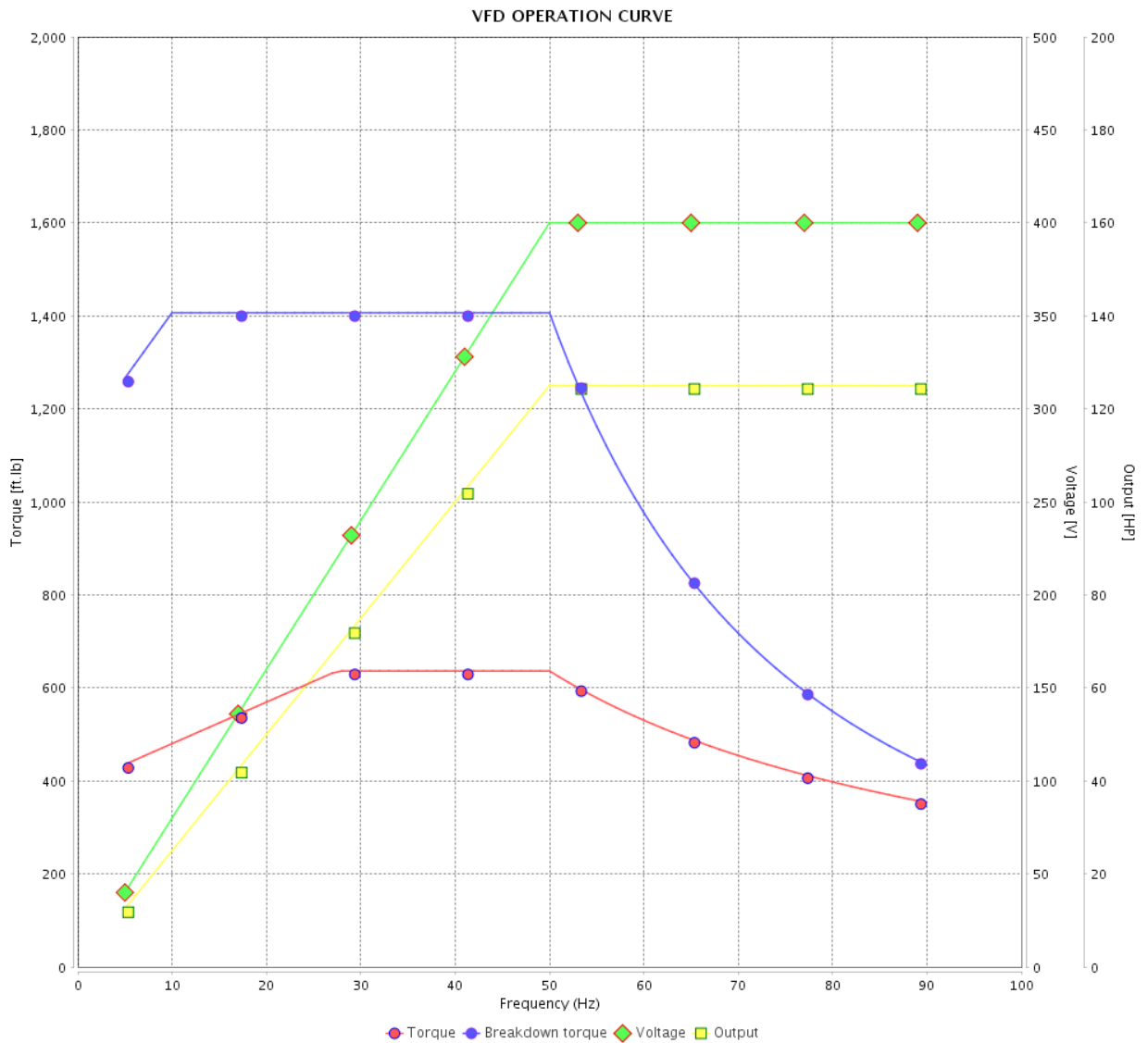


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G



Performance : 400 V 50 Hz 6P IE1

Rated current : 165 A
 LRC : 5.7
 Rated torque : 670 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 210 %
 Rated speed : 980 rpm

Moment of inertia (J) : 104 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



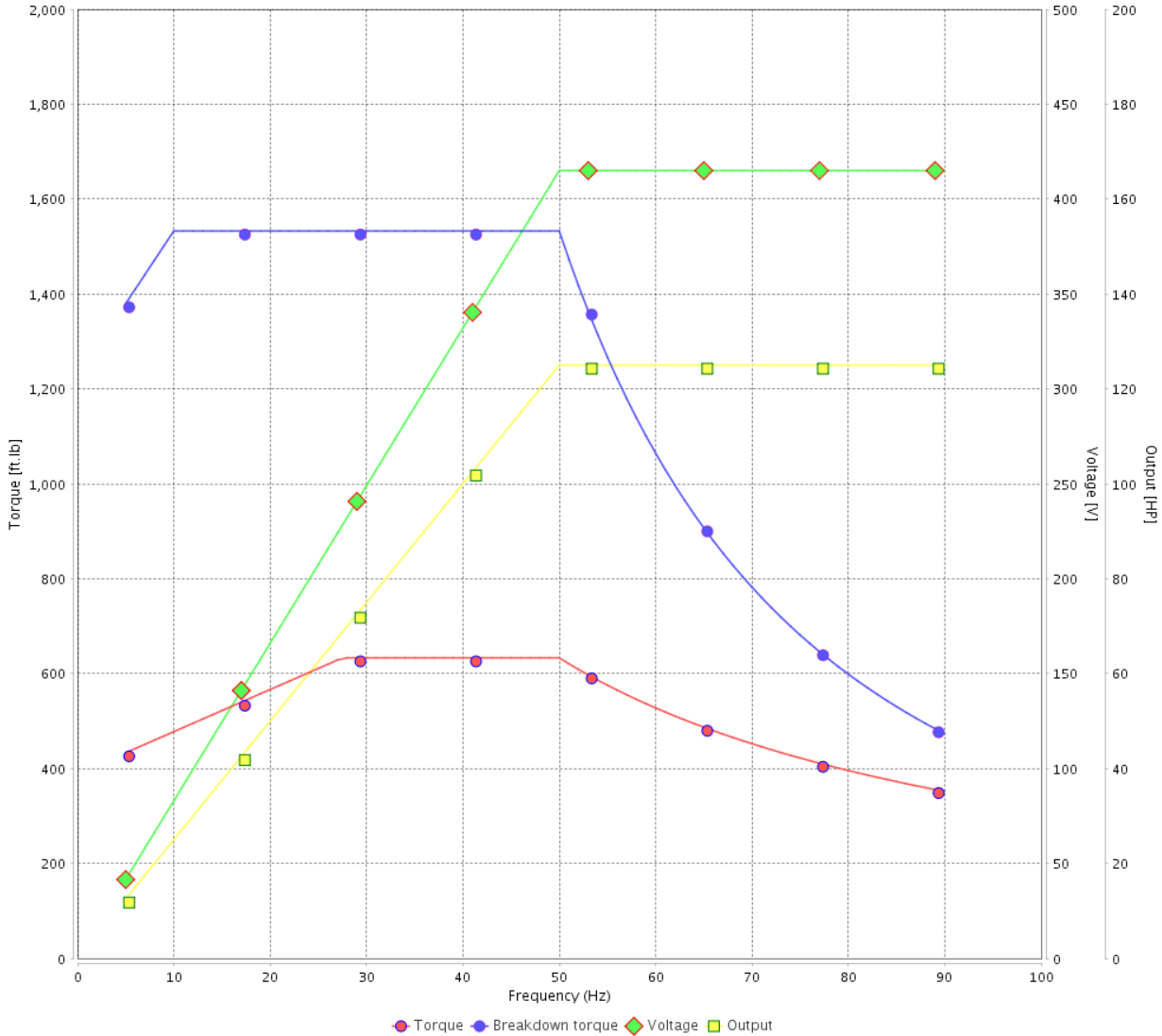
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13273087

Catalog # : 12512ET3E445T-W22G

VFD OPERATION CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 160 A	Moment of inertia (J)	: 104 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 666 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 985 rpm	Design	: B

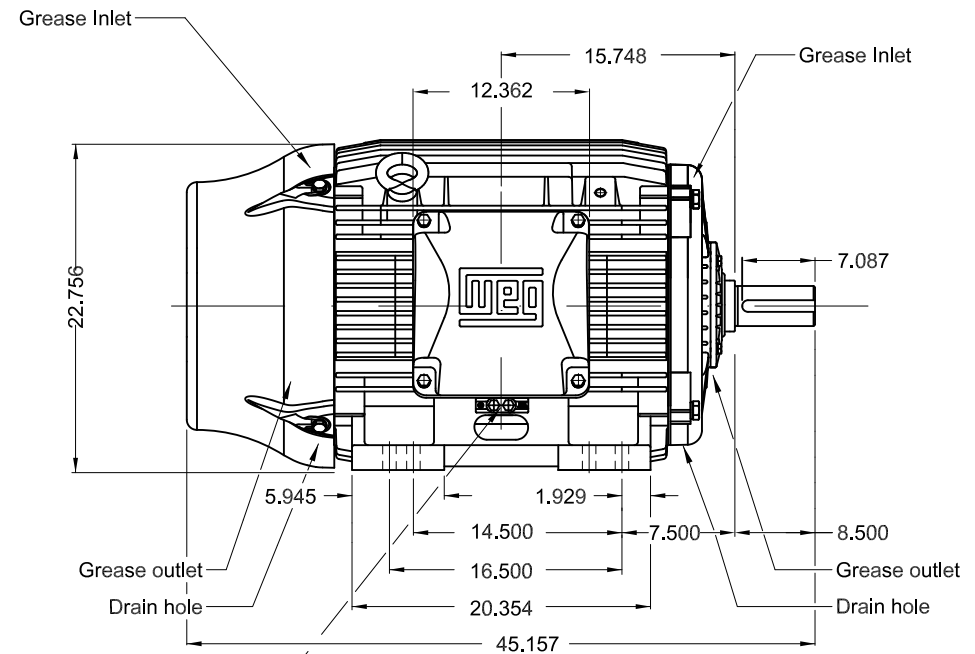
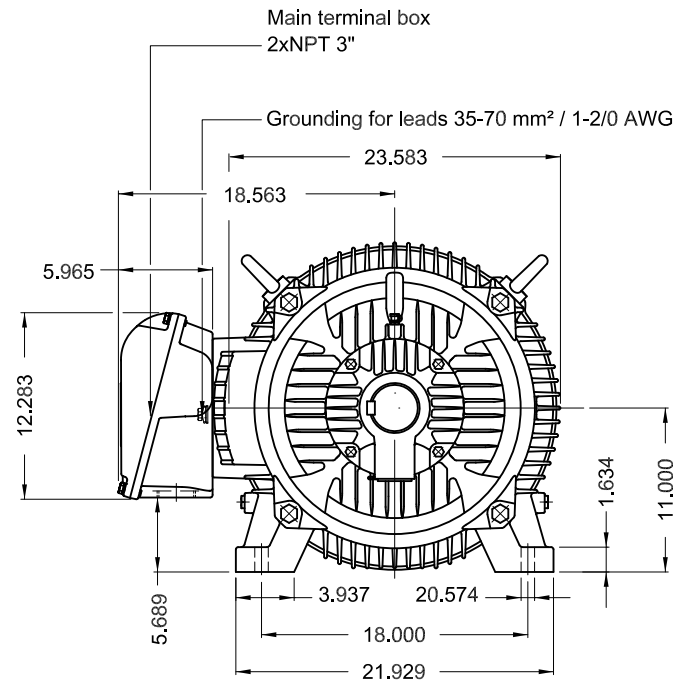
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 36 / 36	Revision
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

A

B

C

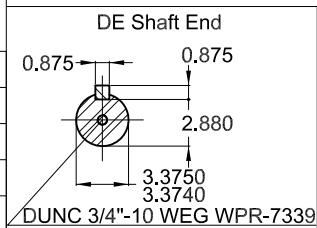


Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

- Internal AEGIS ground ring on the DE
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



125 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF. FRAME 444/5T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD





Mod.TE1BFOXON
CC029A

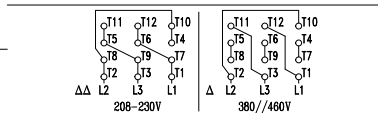
MODEL 12512ET3E445T-W22G



Inverter Duty Motor
Severe Duty


60Hz: For use on PWM: VT 1000:1,
CT 20:1, 1.00SF

MADE IN MEXICO
13273087

PH3	60Hz	Fr. 444/5T	1000m.a.s.l.	IP55	TEFC	1802lb		
V	230/460			A	286/143			
HP	125			kW	90			
SF	1.15			SFA	329/164			
RPM	1185			PF	0.83			
AMB	40°C			INS cl.	F DT80K	NEMA NOM EFF	95.0%	
DUTY CONT.				DES B	Code G			
USABLE @208V	316A	SF 1.00						
125HP	90kW	50Hz	380V	172A	980RPM	SF 1.00	EFF 93.6%	(IE1)



 → 6319-C3 (45g)
 → 6316-C3 (34g)

 MOBIL POLYREX EM (13000h)
