

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer							
Product line	: NEMA Premium Efficiency Three-Phase	Product code	: 12006668				
		Catalog #	: 10018ET3E405TC-W22				
Frame	: 404/5TC	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	: 1205 lb				
Protection degree	: IP55	Moment of inertia (J)	: 29.9 sq.ft.lb				
Design	: B						
Output [HP]	100	75	75	75	100	100	100
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	226/113	102	98.3	95.9	138	131	127
L. R. Amperes [A]	1650/825	785	826	854	814	852	902
LRC [A]	7.3x(Code H)	7.7x(Code H)	8.4x(Code J)	8.9x(Code K)	5.9x(Code F)	6.5x(Code G)	7.1x(Code H)
No load current [A]	76.0/38.0	37.6	40.1	42.0	37.6	40.1	42.0
Rated speed [RPM]	1780	1485	1485	1485	1470	1475	1475
Slip [%]	1.11	1.00	1.00	1.00	2.00	1.67	1.67
Rated torque [ft.lb]	295	265	265	265	357	356	356
Locked rotor torque [%]	240	260	280	290	190	210	220
Breakdown torque [%]	260	280	310	330	210	229	250
Service factor	1.25	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	23s (cold) 13s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)
Noise level ²	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%						
	50%	95.0	94.0	93.9	93.6	94.5	94.5
	75%	95.0	94.4	94.5	94.5	94.1	94.5
	100%	95.4	95.0	95.0	95.0	93.6	94.1
Power Factor	25%						
	50%	0.77	0.72	0.69	0.66	0.82	0.79
	75%	0.84	0.83	0.81	0.79	0.86	0.85
	100%	0.87	0.86	0.85	0.84	0.88	0.88
Bearing type	: 6316 C3	6314 C3	Foundation loads				
Sealing	: WSeal	WSeal	Max. traction	: 2069 lb			
Lubrication interval	: 10000 h	12000 h	Max. compression	: 3274 lb			
Lubricant amount	: 34 g	27 g					
Lubricant type	: Mobil Polyrex EM						
Notes							
USABLE @208V 245A SF 1.10 SFA 270A							
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



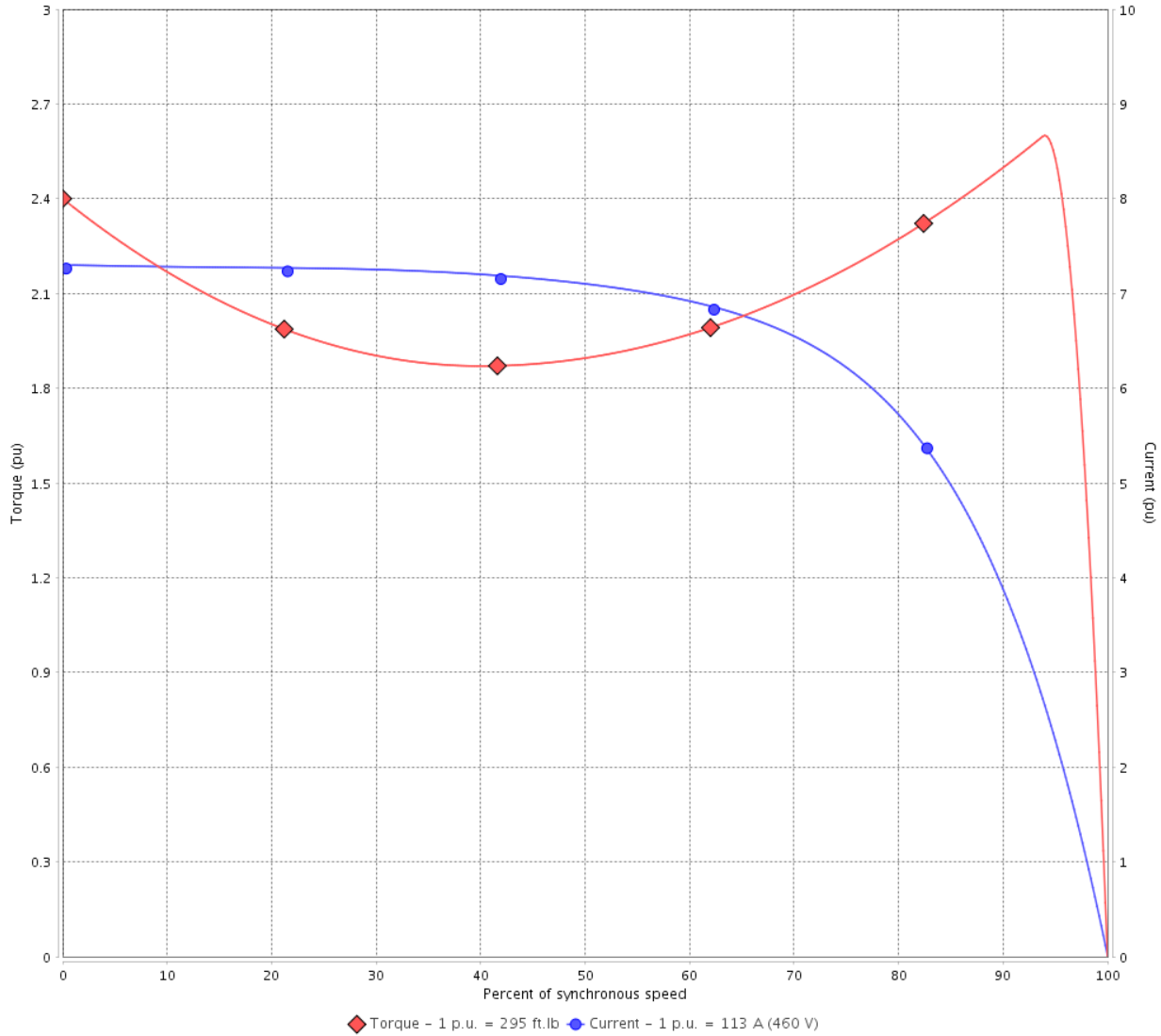
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 226/113 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 295 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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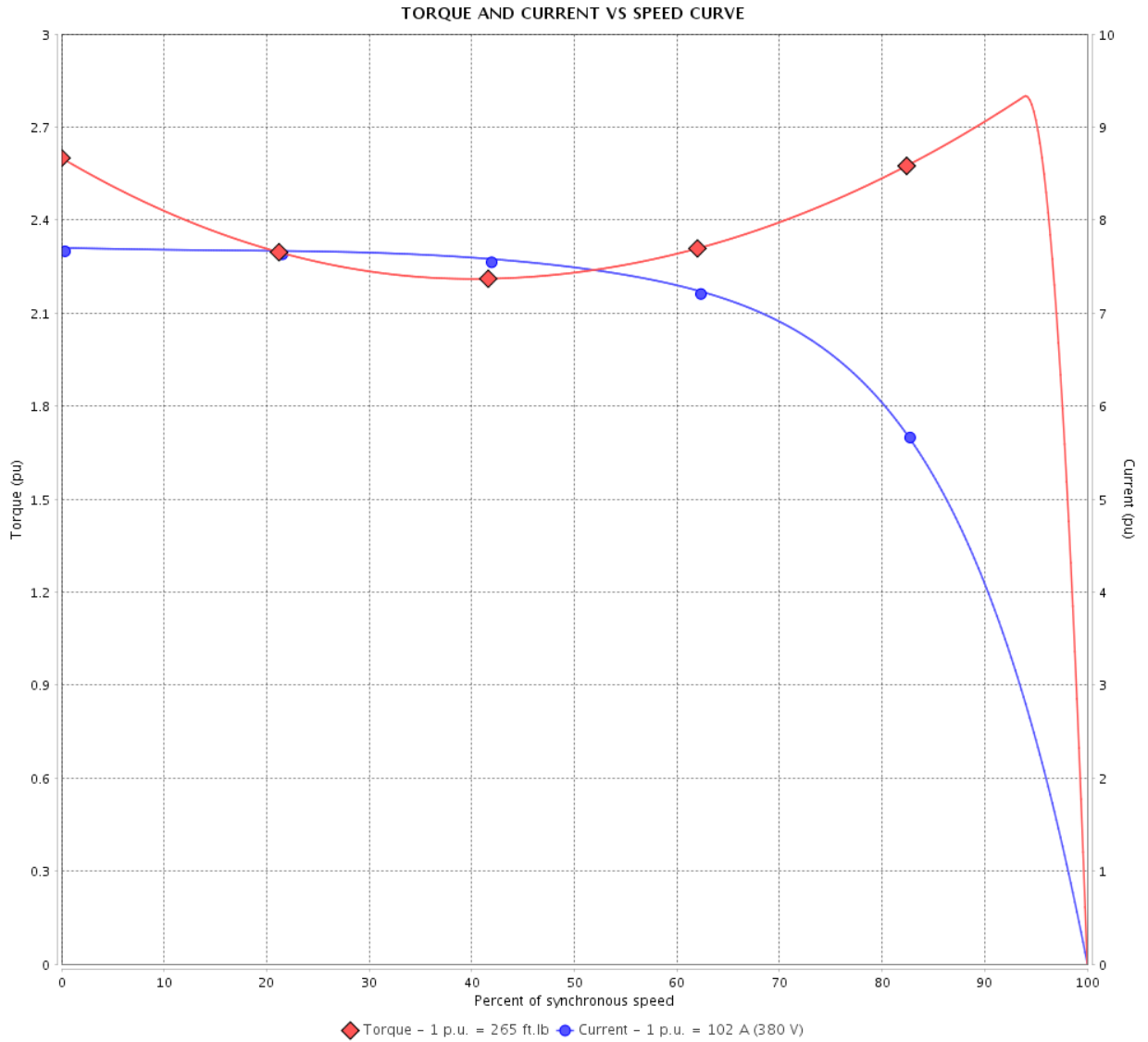
Three Phase Induction Motor - Squirrel Cage

Customer :

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 102 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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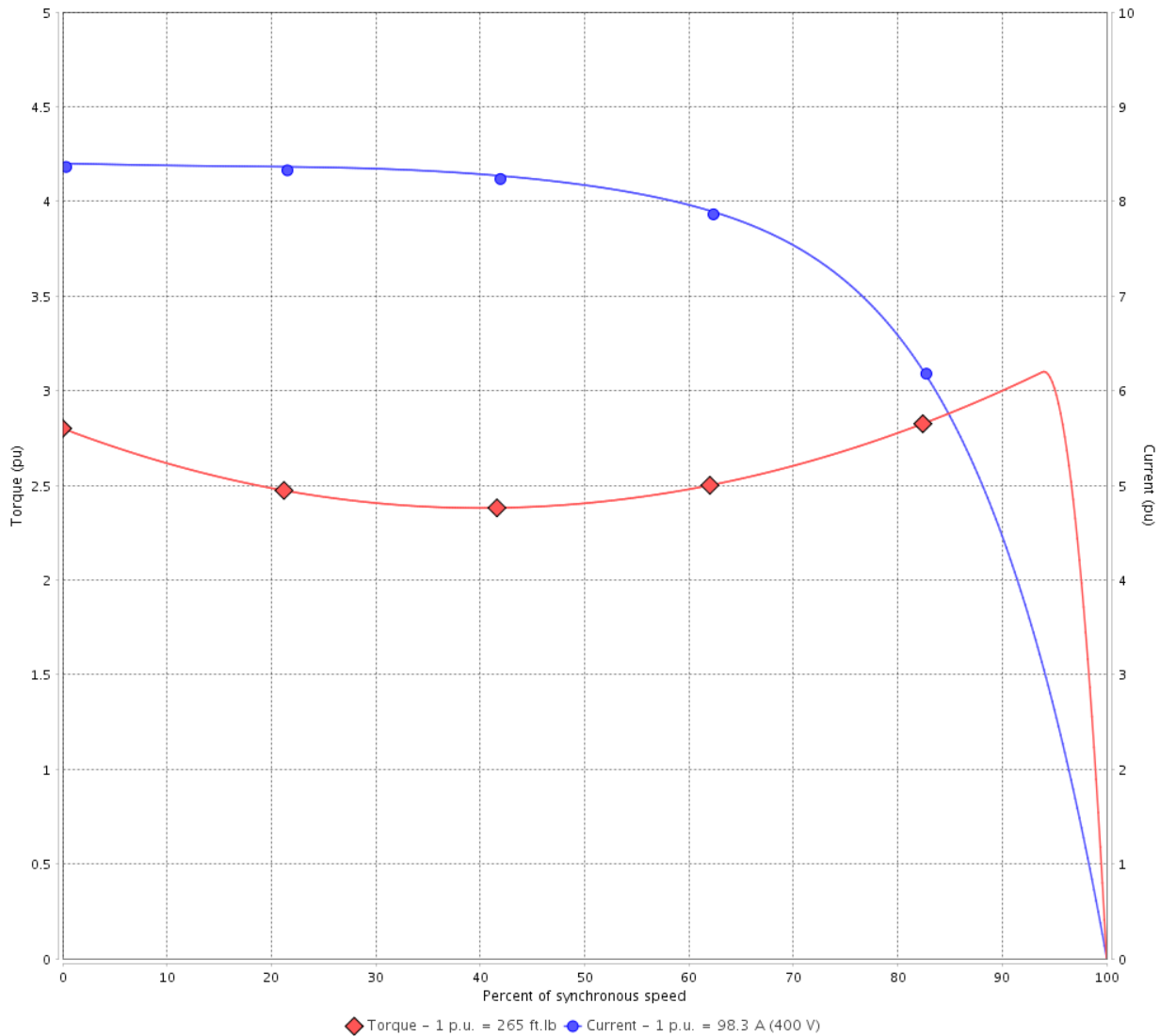
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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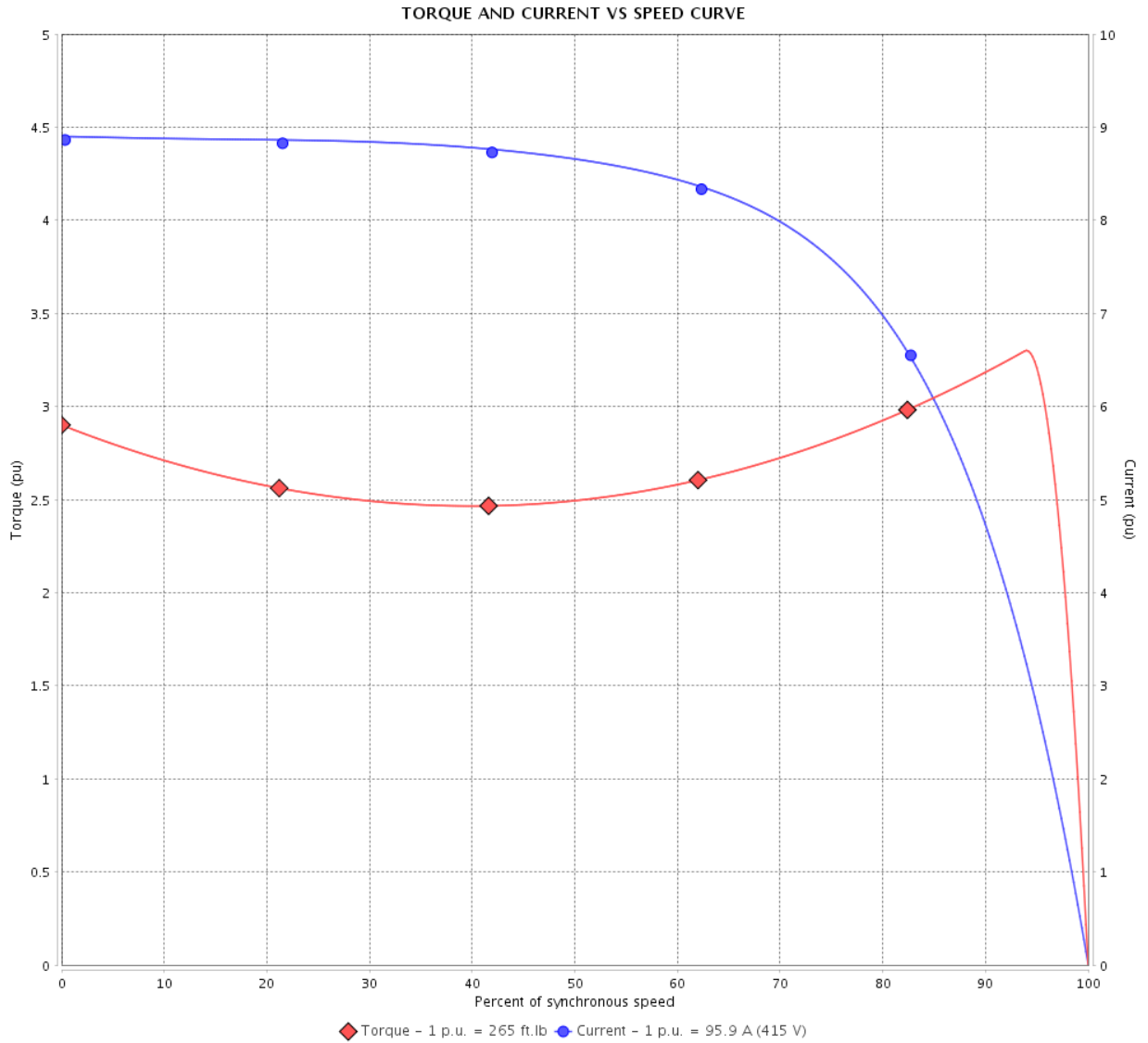
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Performance : 415 V 50 Hz 4P IE3

Rated current	: 95.9 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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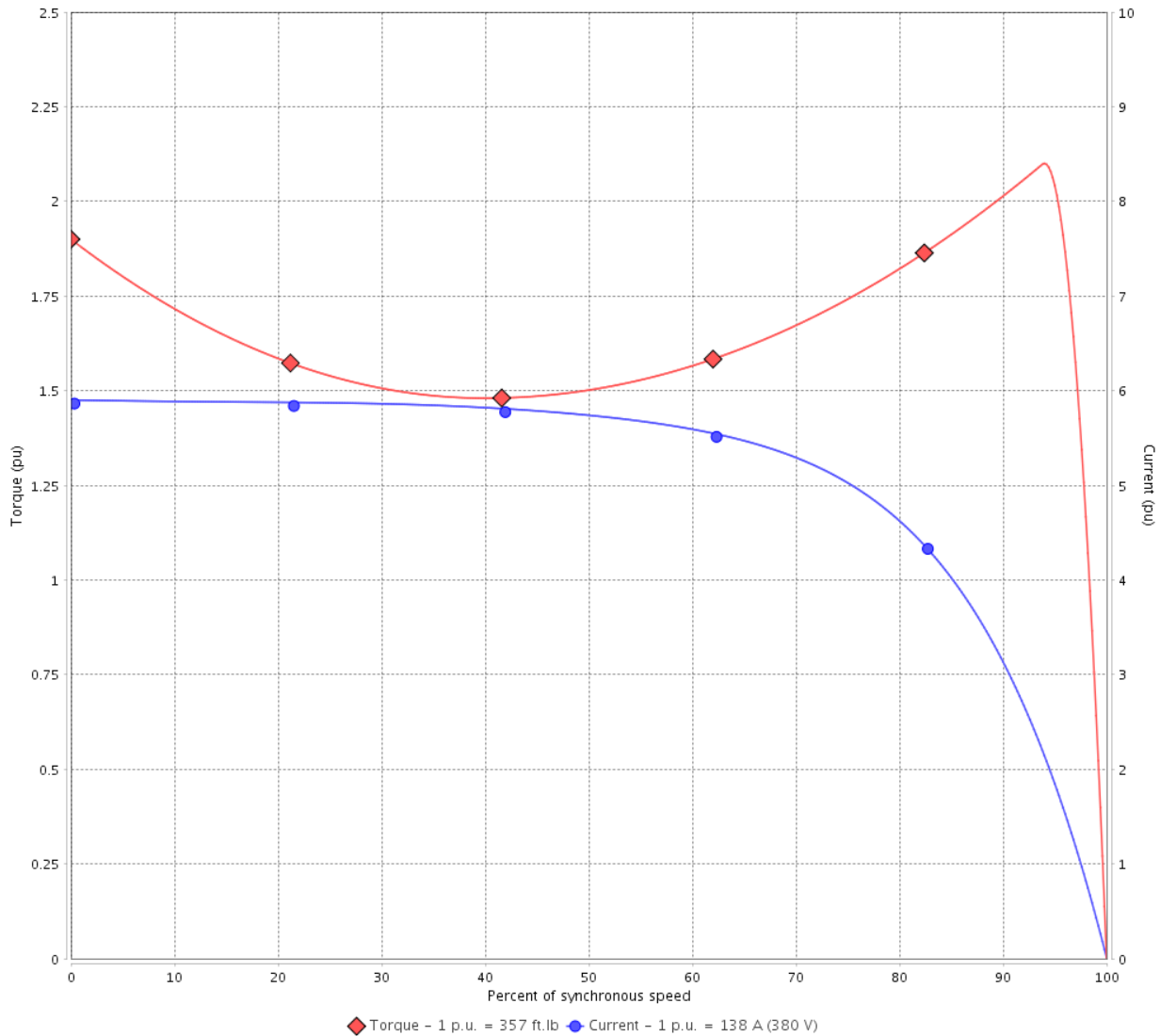
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 138 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 357 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1470 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



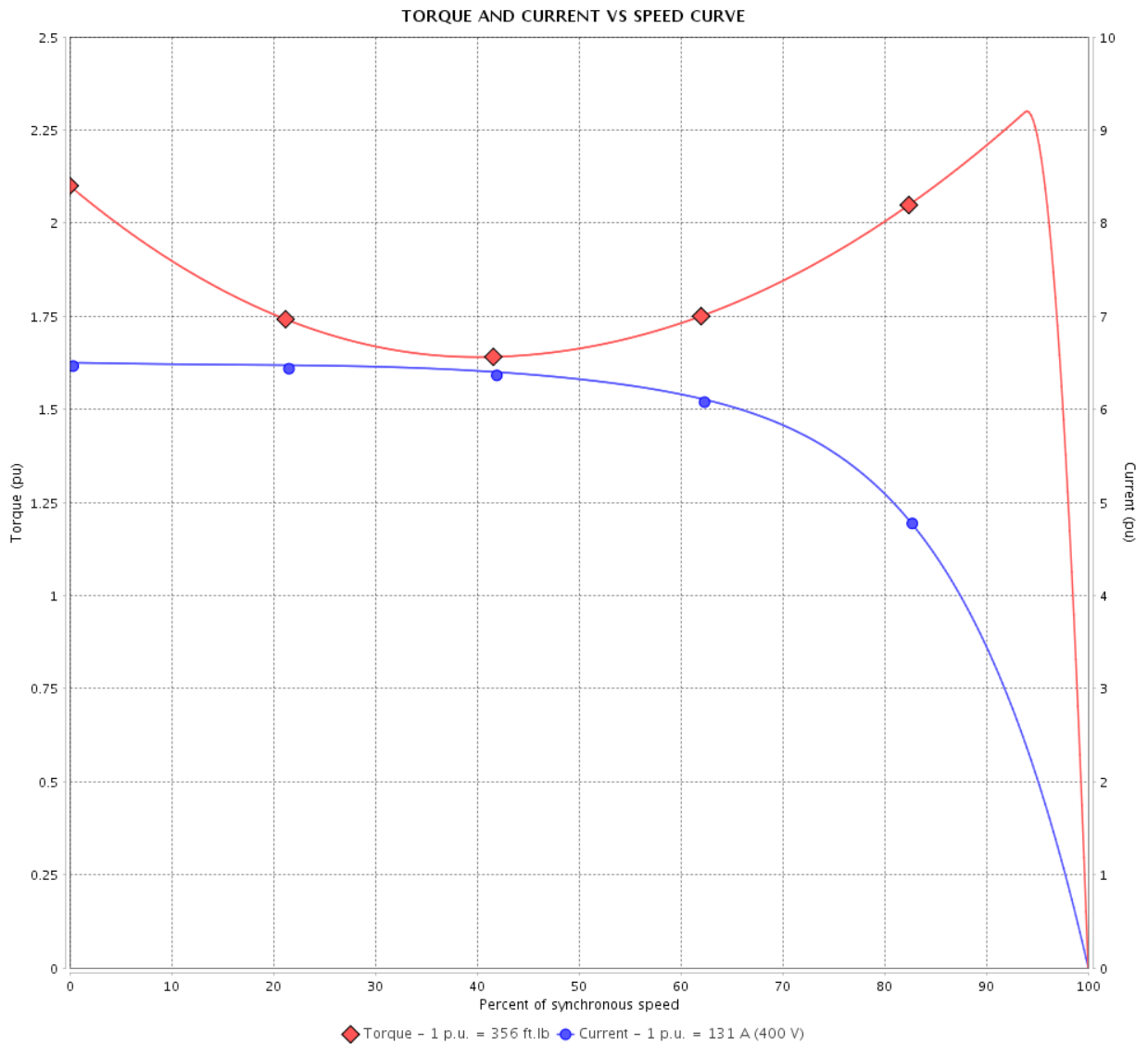
Three Phase Induction Motor - Squirrel Cage

Customer :

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Performance : 400 V 50 Hz 4P IE2

Rated current	: 131 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 356 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



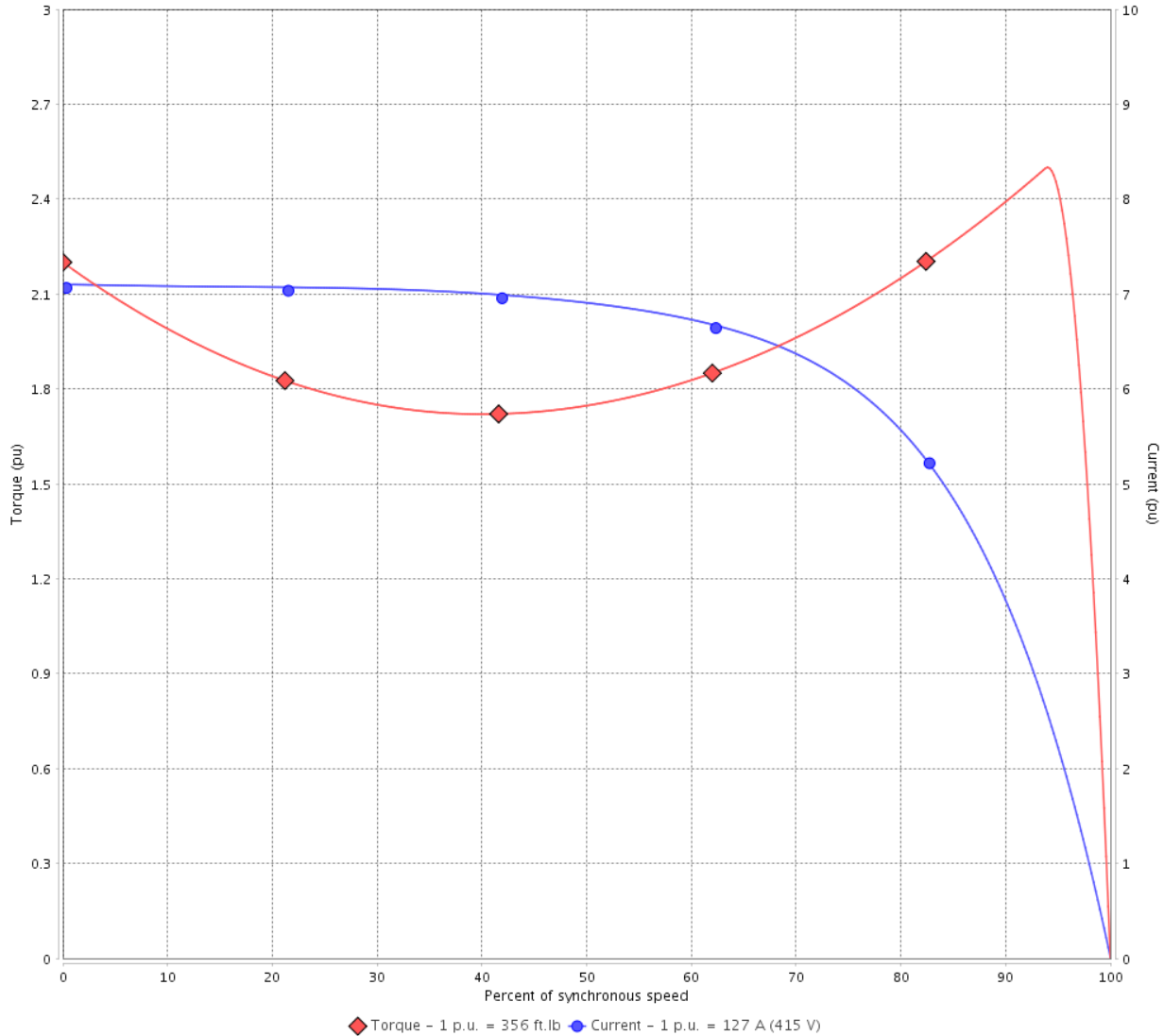
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Catalog # : 10018ET3E405TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 127 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 356 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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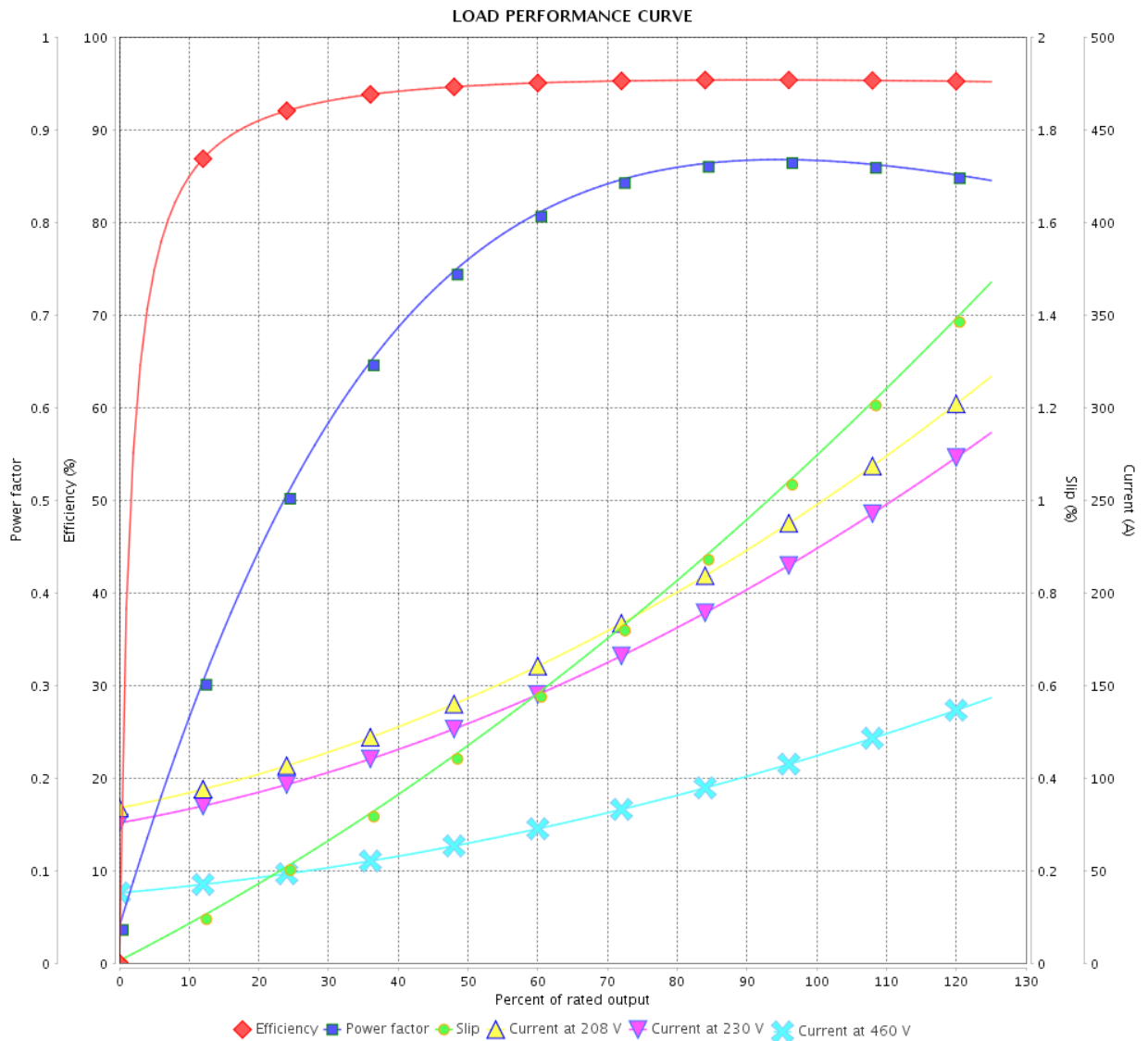


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Performance : 230/460 V 60 Hz 4P

Rated current : 226/113 A
 LRC : 7.3
 Rated torque : 295 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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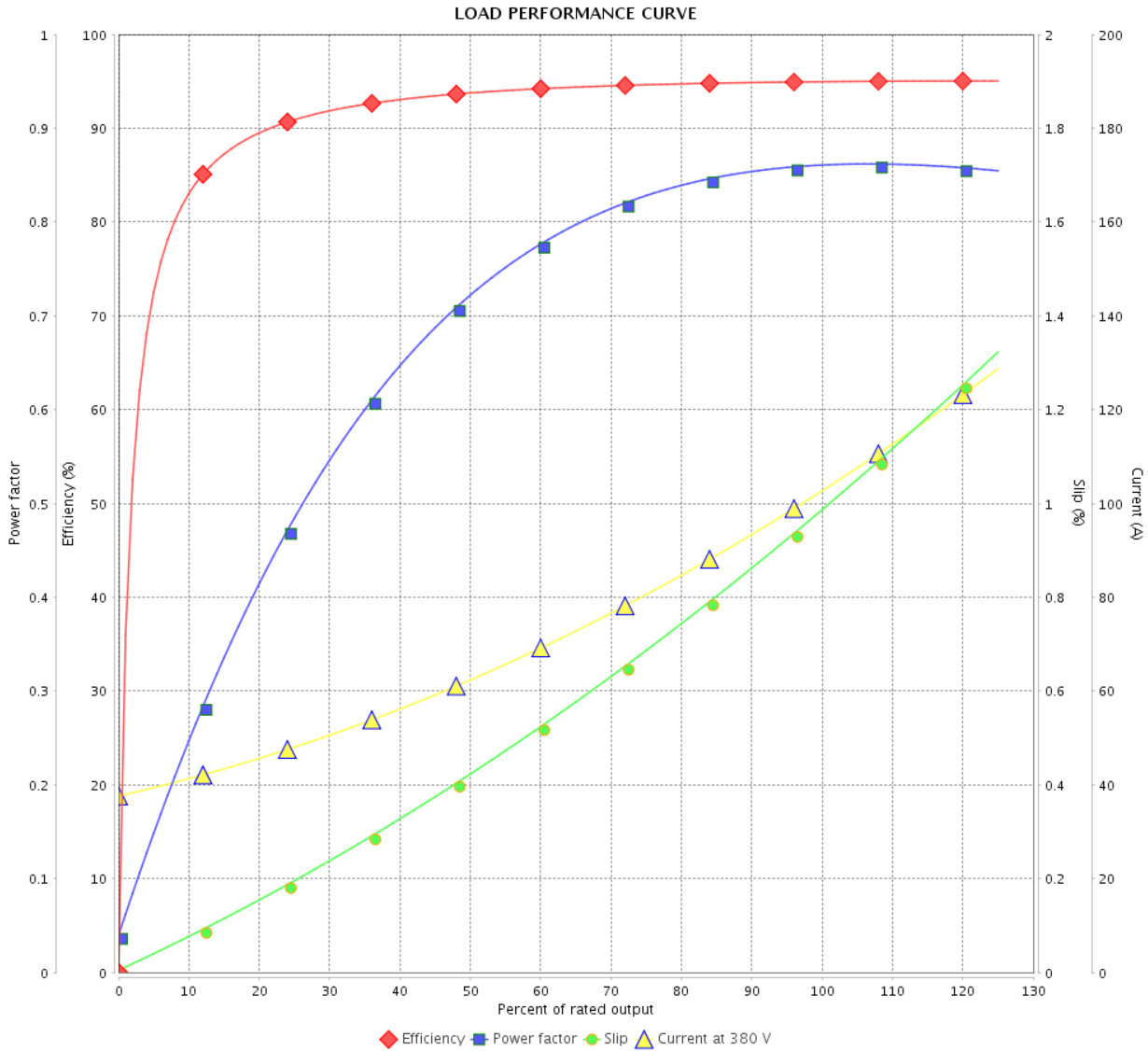


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Performance : 380 V 50 Hz 4P IE3

Rated current	: 102 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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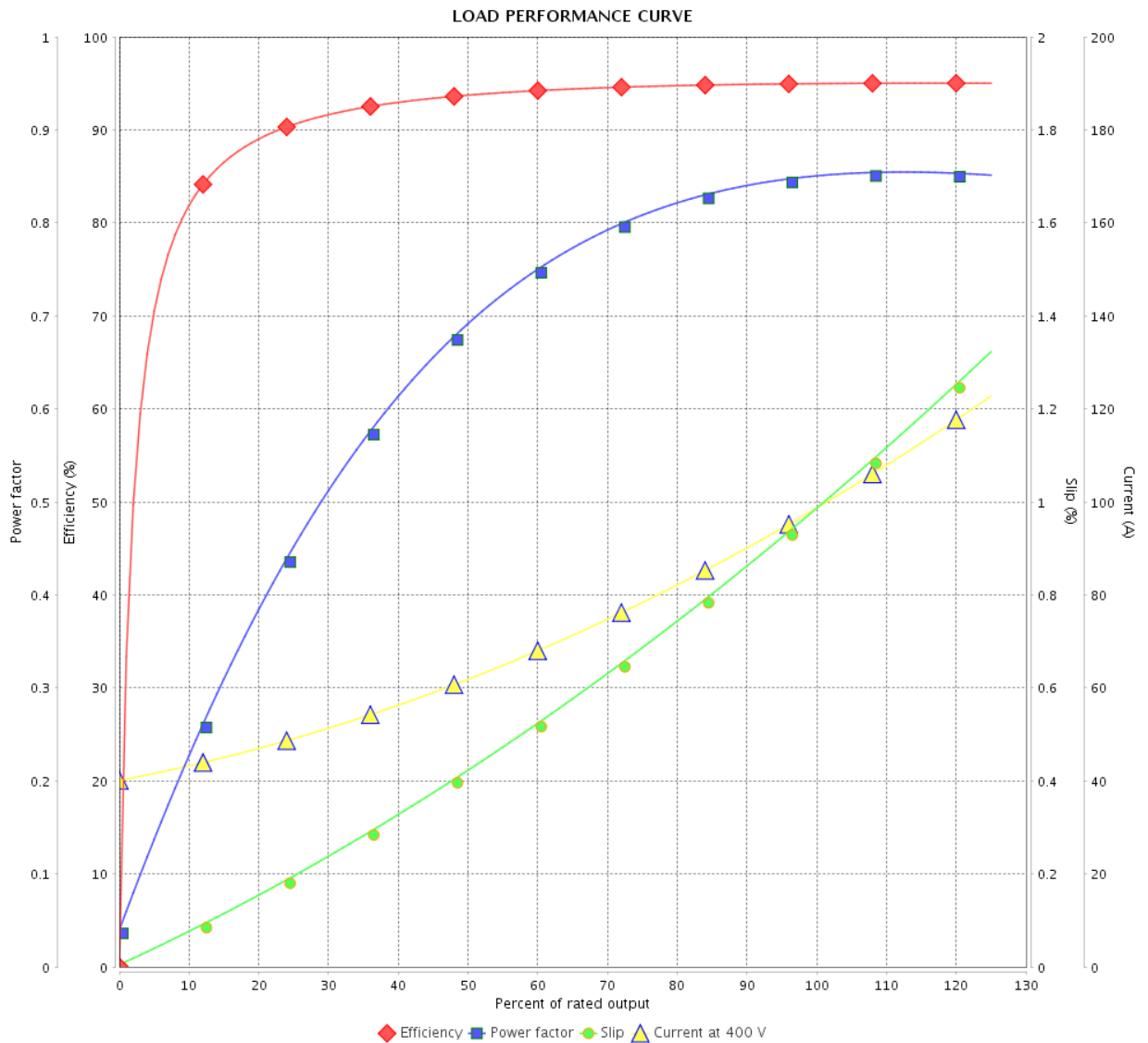


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Performance : 400 V 50 Hz 4P IE3

Rated current : 98.3 A
 LRC : 8.4
 Rated torque : 265 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 310 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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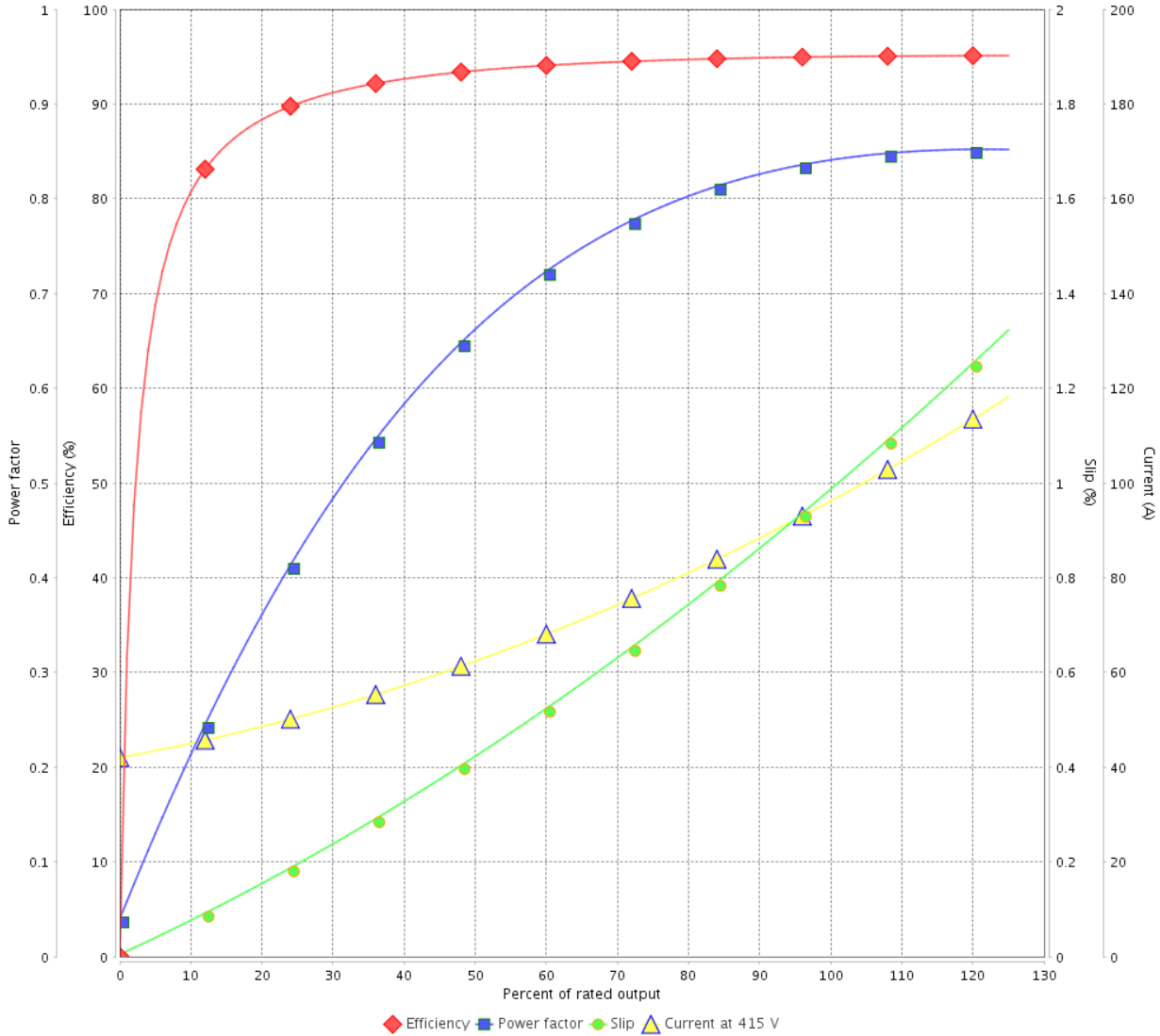
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Performance : 415 V 50 Hz 4P IE3

Rated current : 95.9 A
 LRC : 8.9
 Rated torque : 265 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 330 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 29.9 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

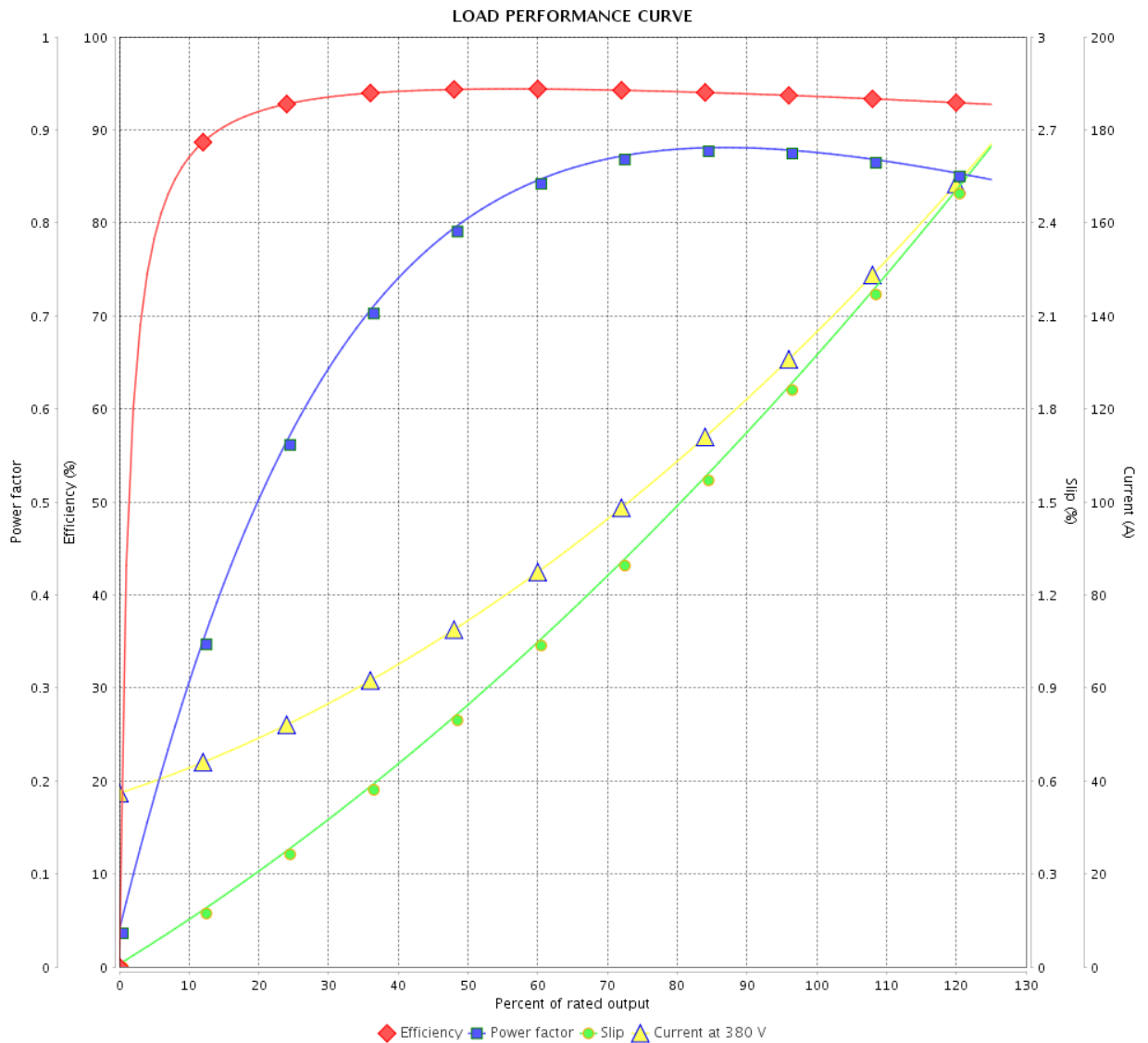


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Product code : 12006668

Catalog # : 10018ET3E405TC-W22



Performance : 380 V 50 Hz 4P IE1

Rated current : 138 A
 LRC : 5.9
 Rated torque : 357 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 210 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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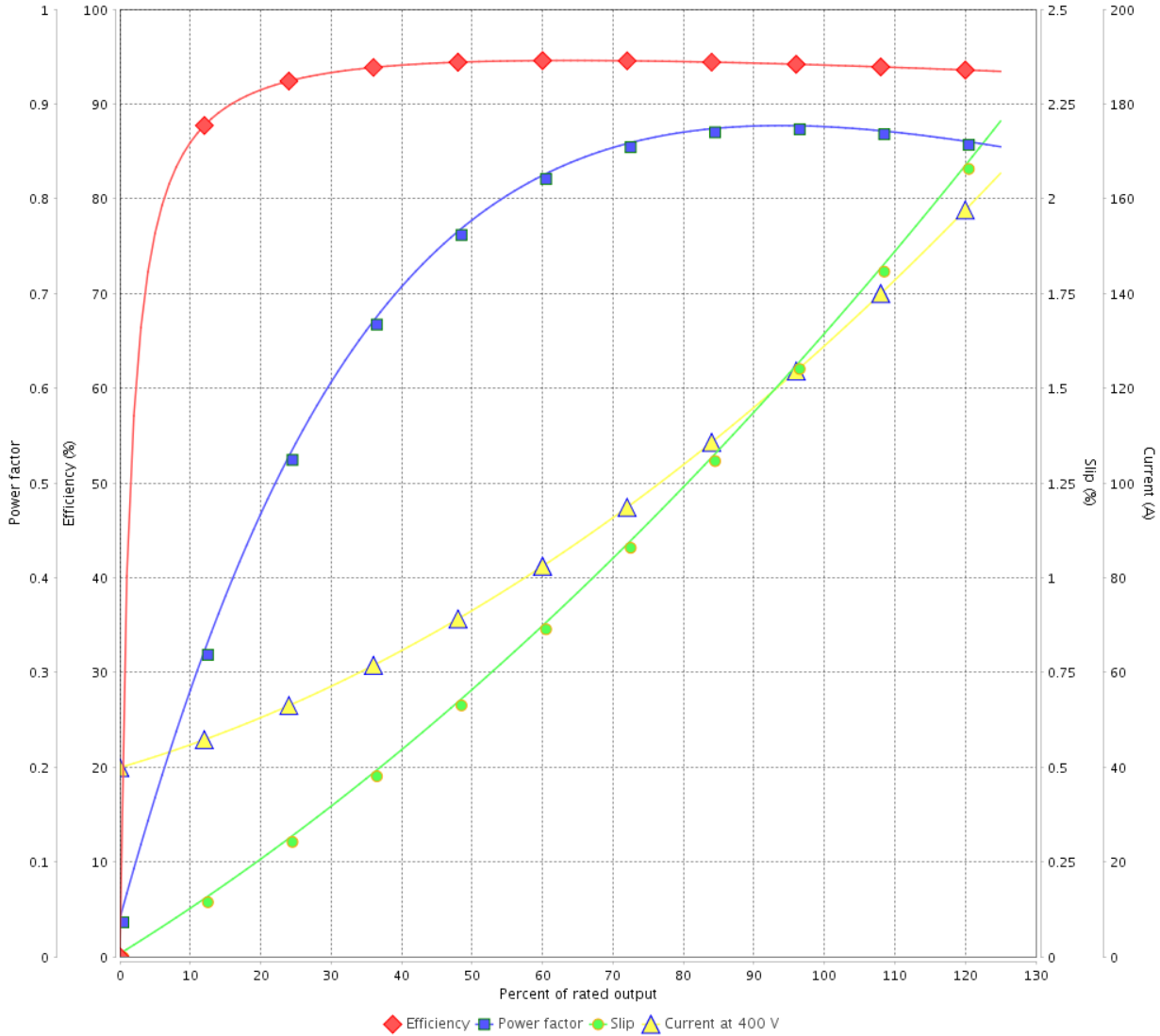
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Performance : 400 V 50 Hz 4P IE2

Rated current	: 131 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 356 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

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Three Phase Induction Motor - Squirrel Cage

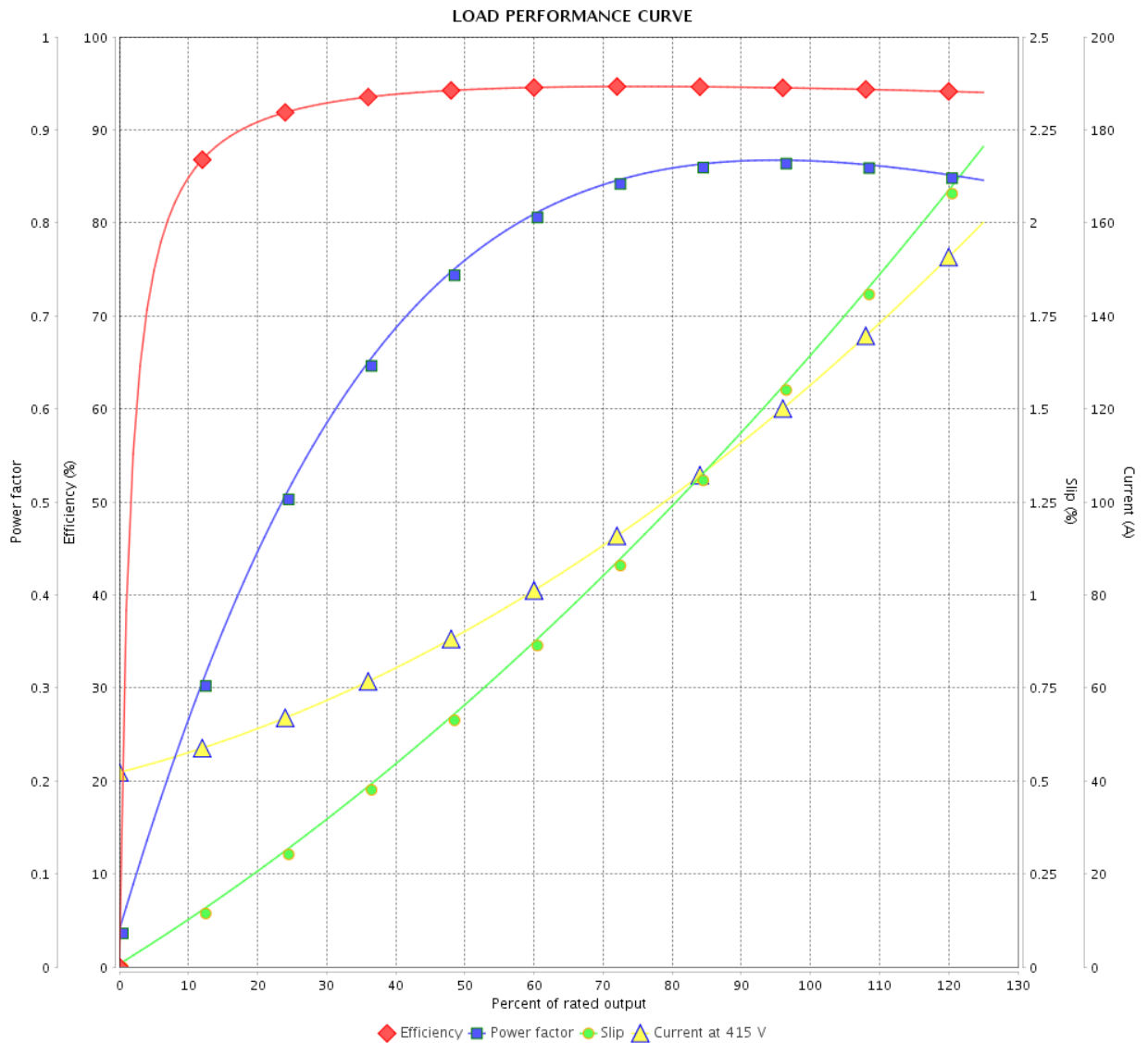


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Performance : 415 V 50 Hz 4P IE2

Rated current : 127 A
 LRC : 7.1
 Rated torque : 356 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 29.9 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



Three Phase Induction Motor - Squirrel Cage

Customer :

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Performance : 230/460 V 60 Hz 4P

Rated current	: 226/113 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 295 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

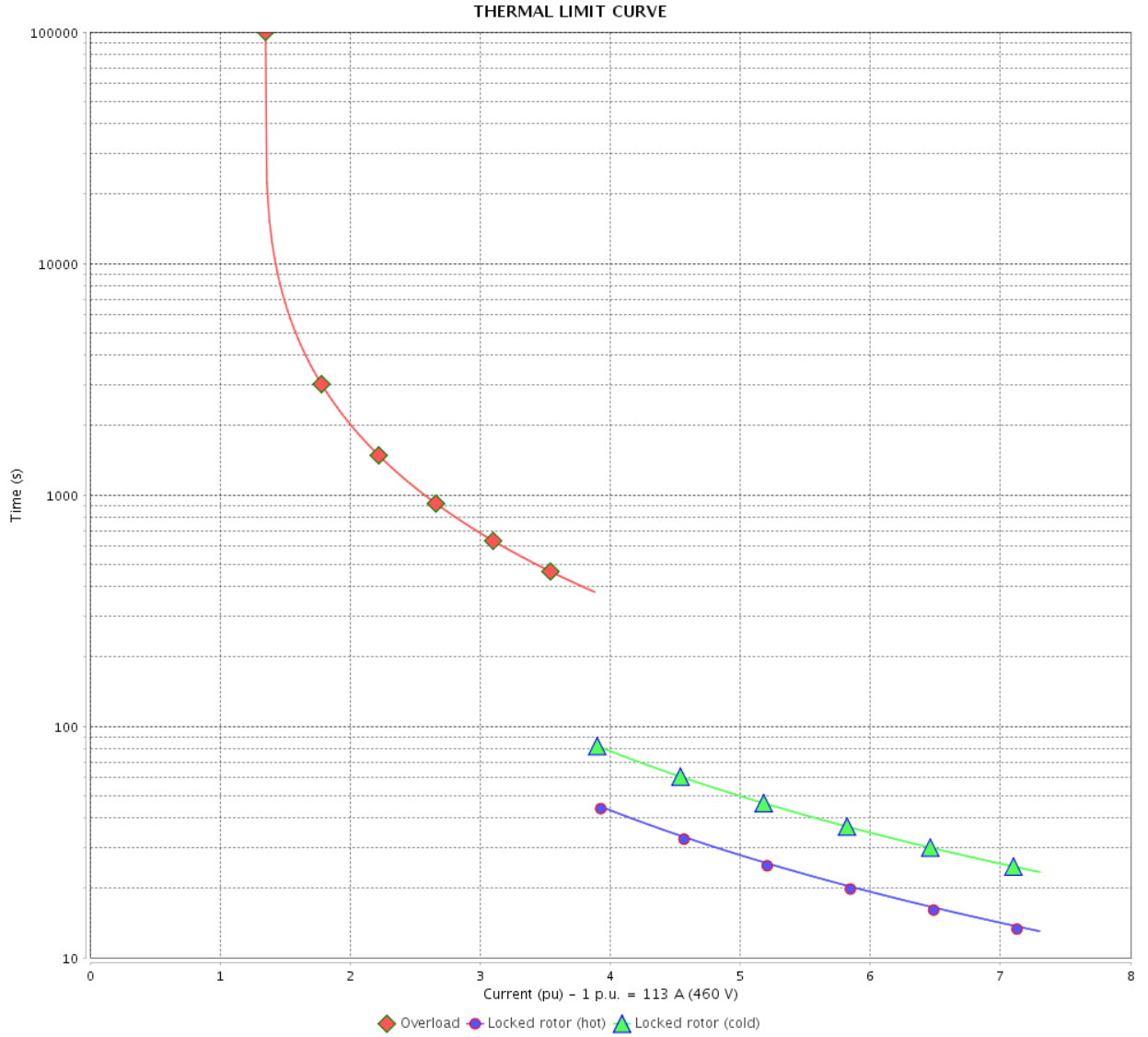
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performance : 380 V 50 Hz 4P IE3

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LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

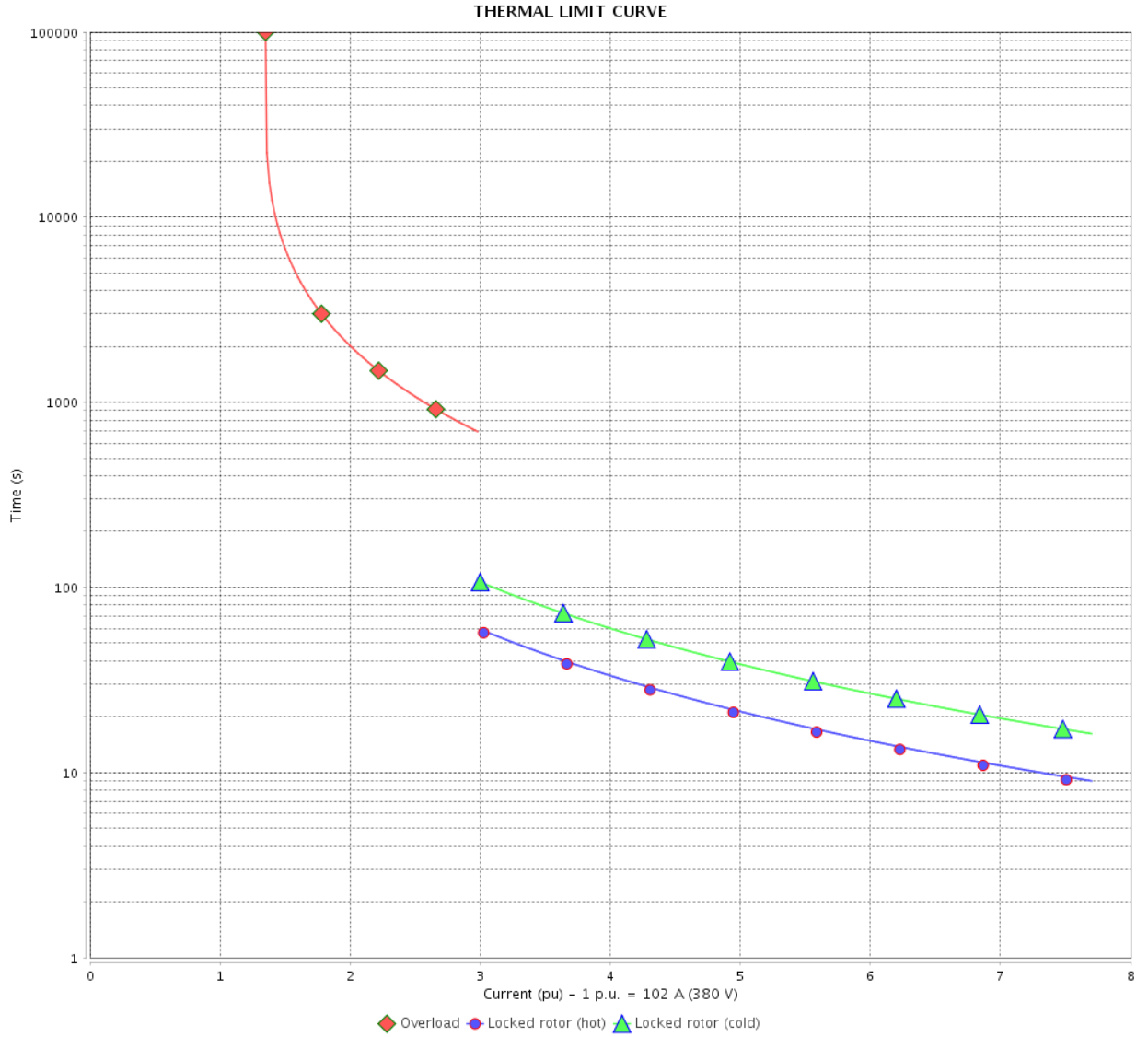
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Performance : 400 V 50 Hz 4P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 29.9 sq.ft.lb
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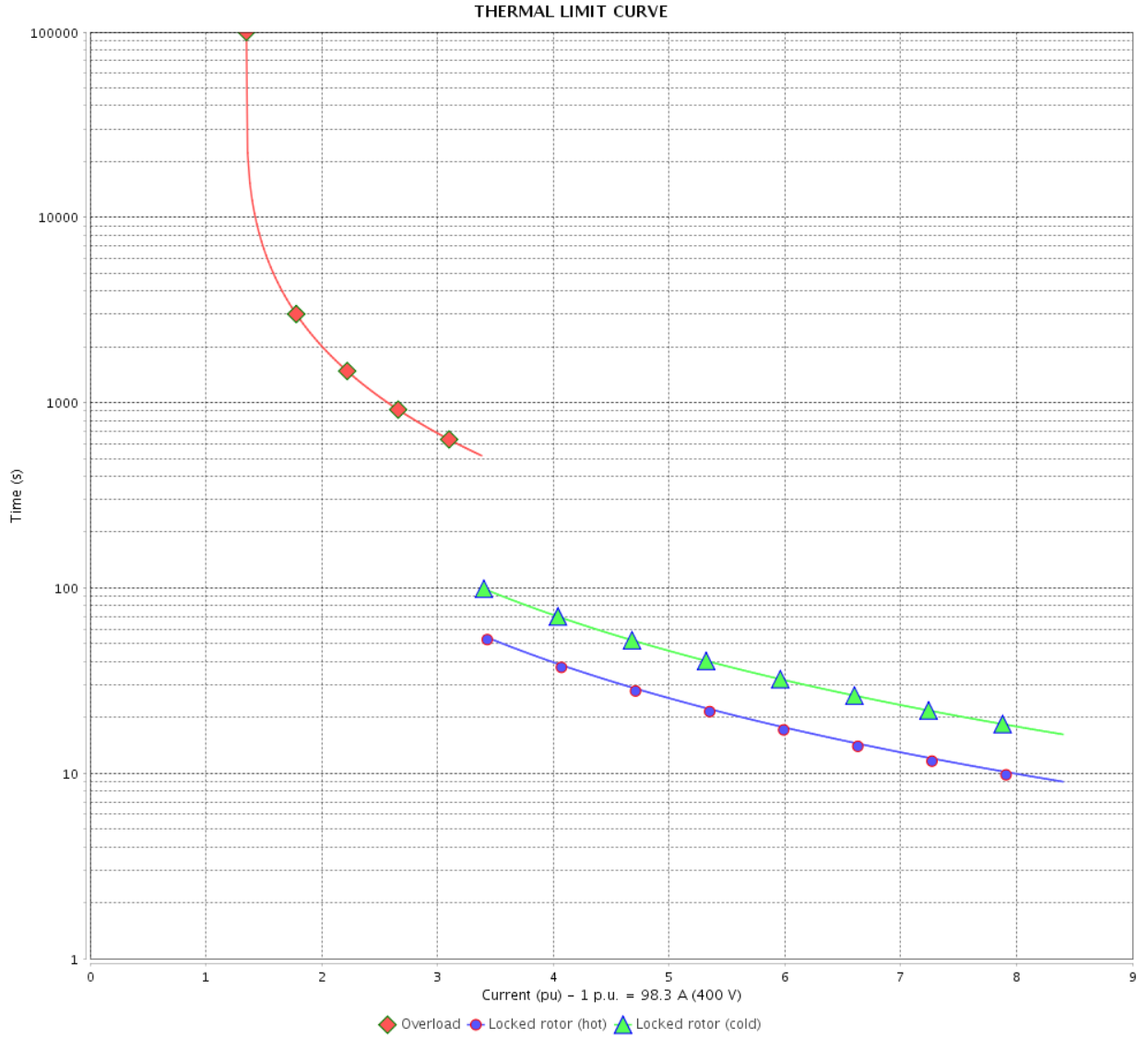
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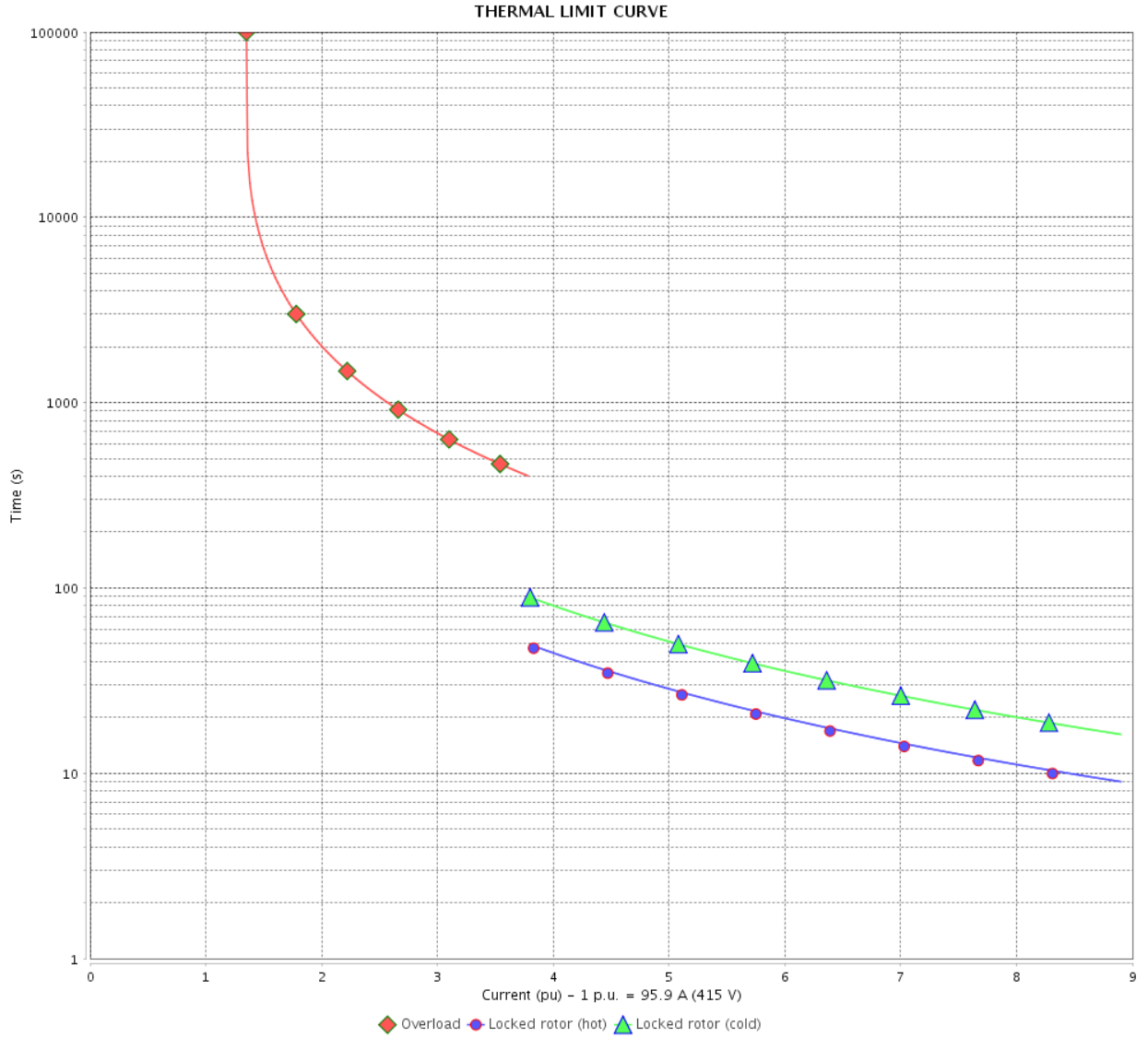
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Performance : 380 V 50 Hz 4P IE1

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LRC	: 5.9	Duty cycle	: Cont.(S1)
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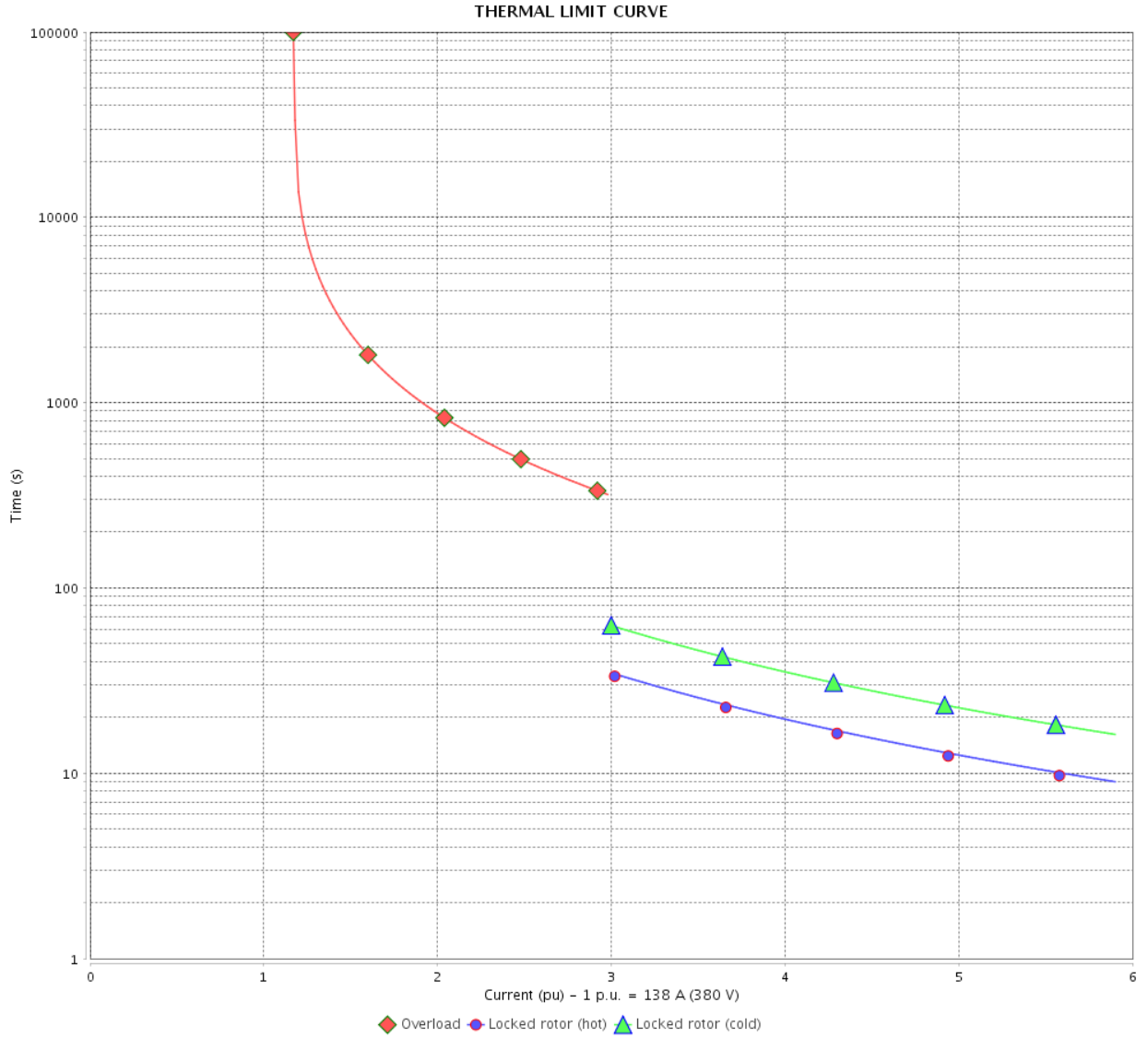
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LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 356 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
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Heating constant

Cooling constant

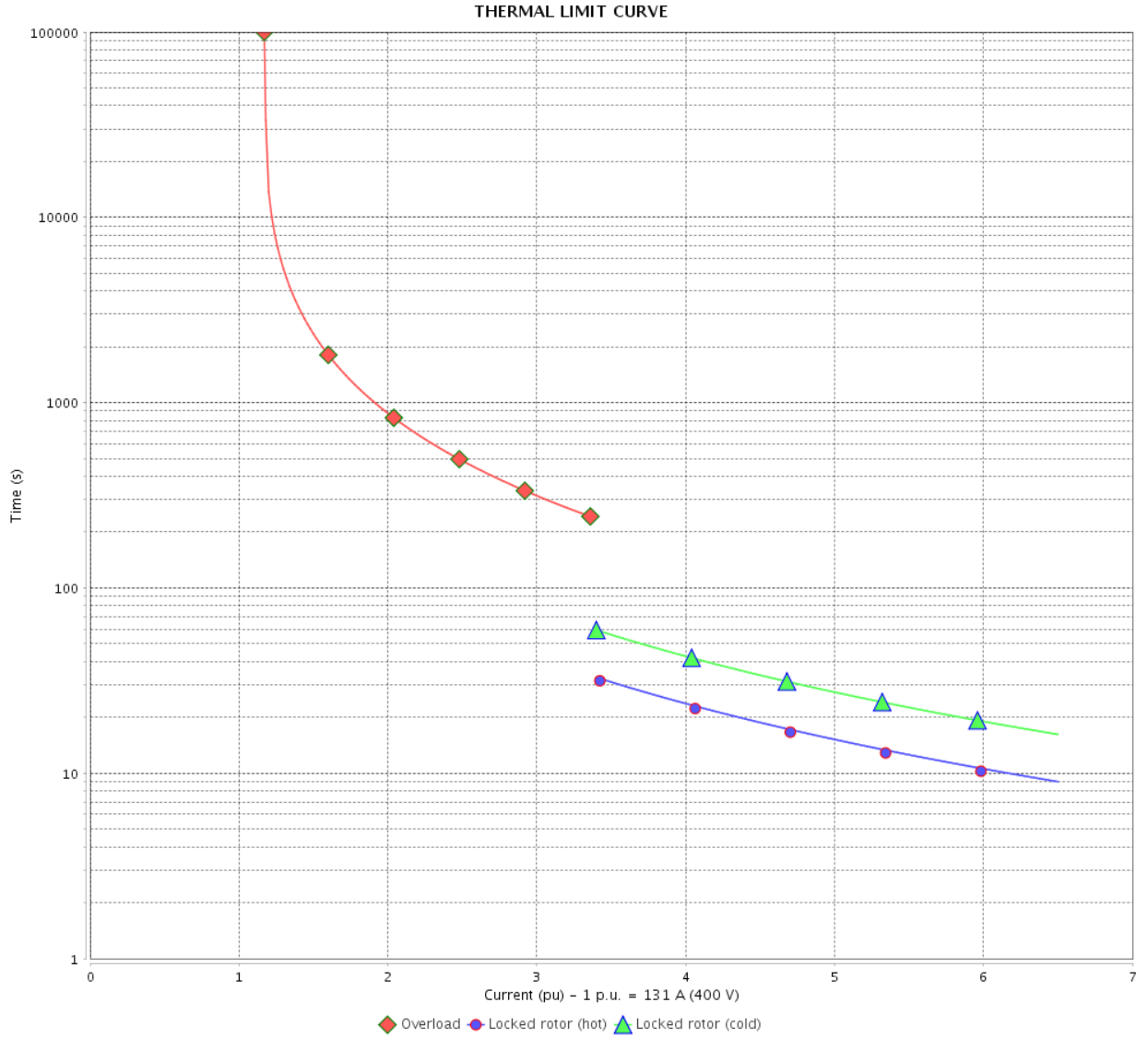
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		26 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performed by				
Checked by				
Date				
			Page	Revision
			27 / 36	

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12006668
 Catalog # : 10018ET3E405TC-W22

Performance : 415 V 50 Hz 4P IE2

Rated current : 127 A	Moment of inertia (J) : 29.9 sq.ft.lb
LRC : 7.1	Duty cycle : Cont.(S1)
Rated torque : 356 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 105 K
Rated speed : 1475 rpm	Design : B

Heating constant

Cooling constant

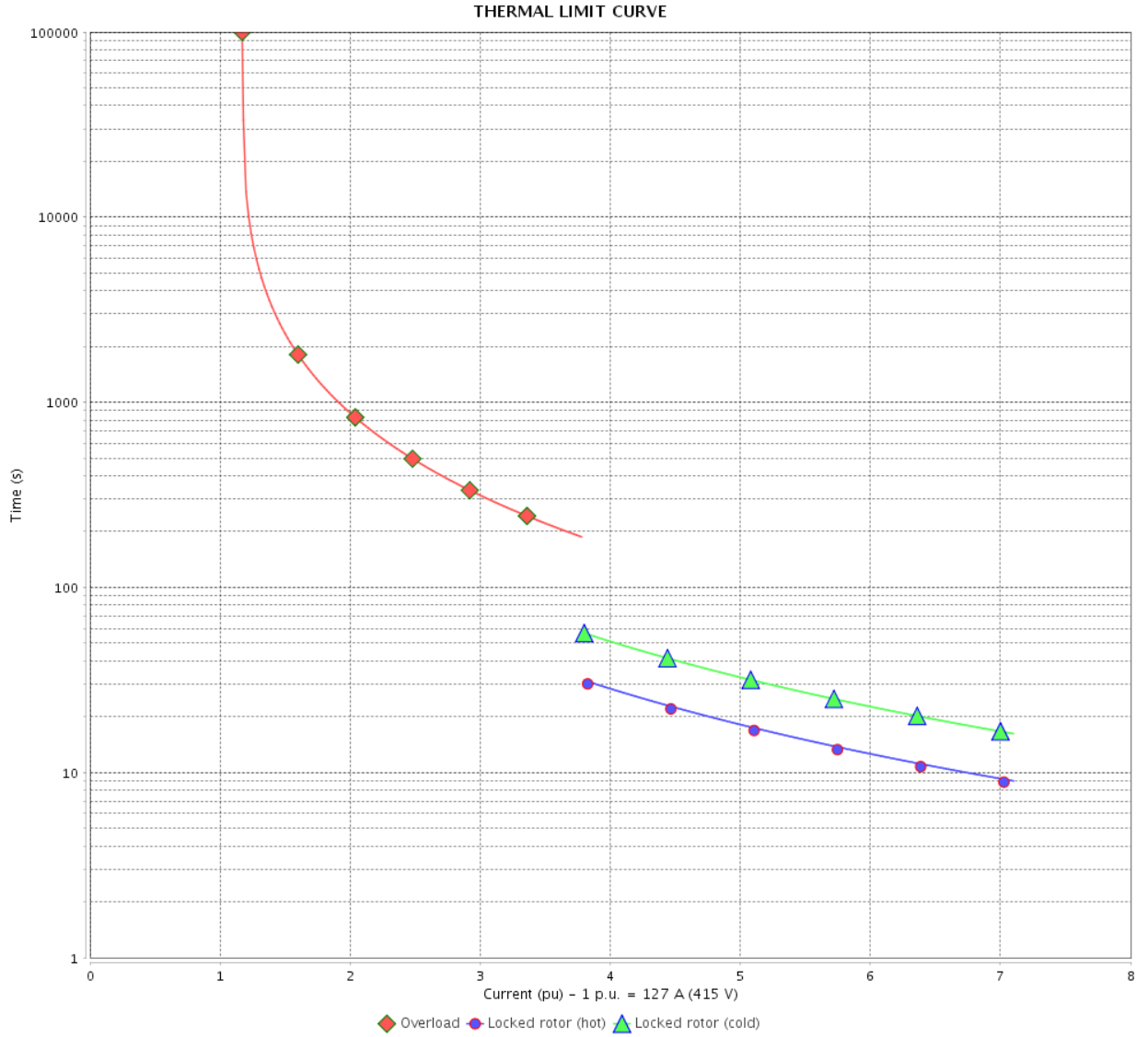
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Performed by			Page 28 / 36	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



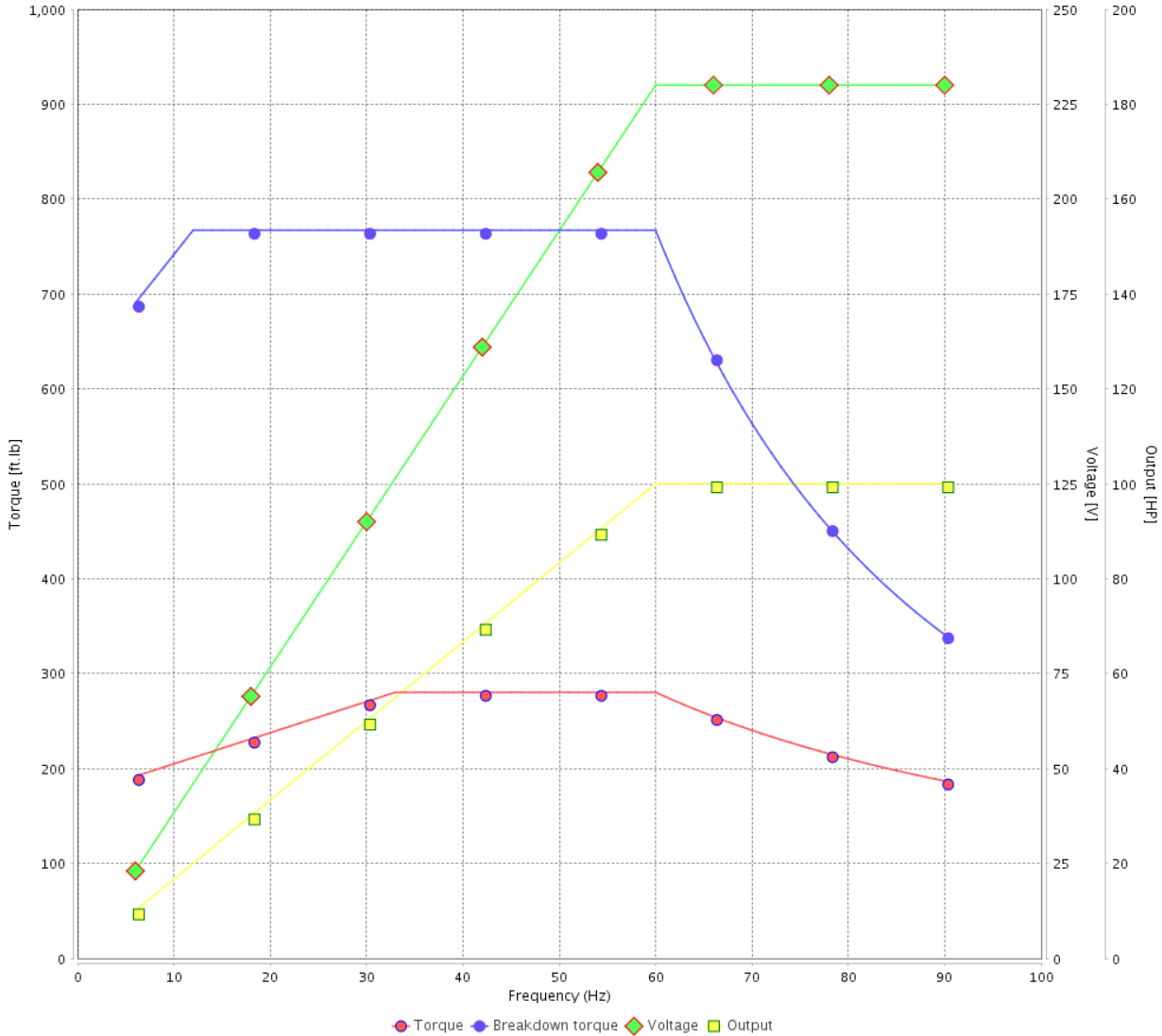
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 226/113 A
 LRC : 7.3
 Rated torque : 295 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

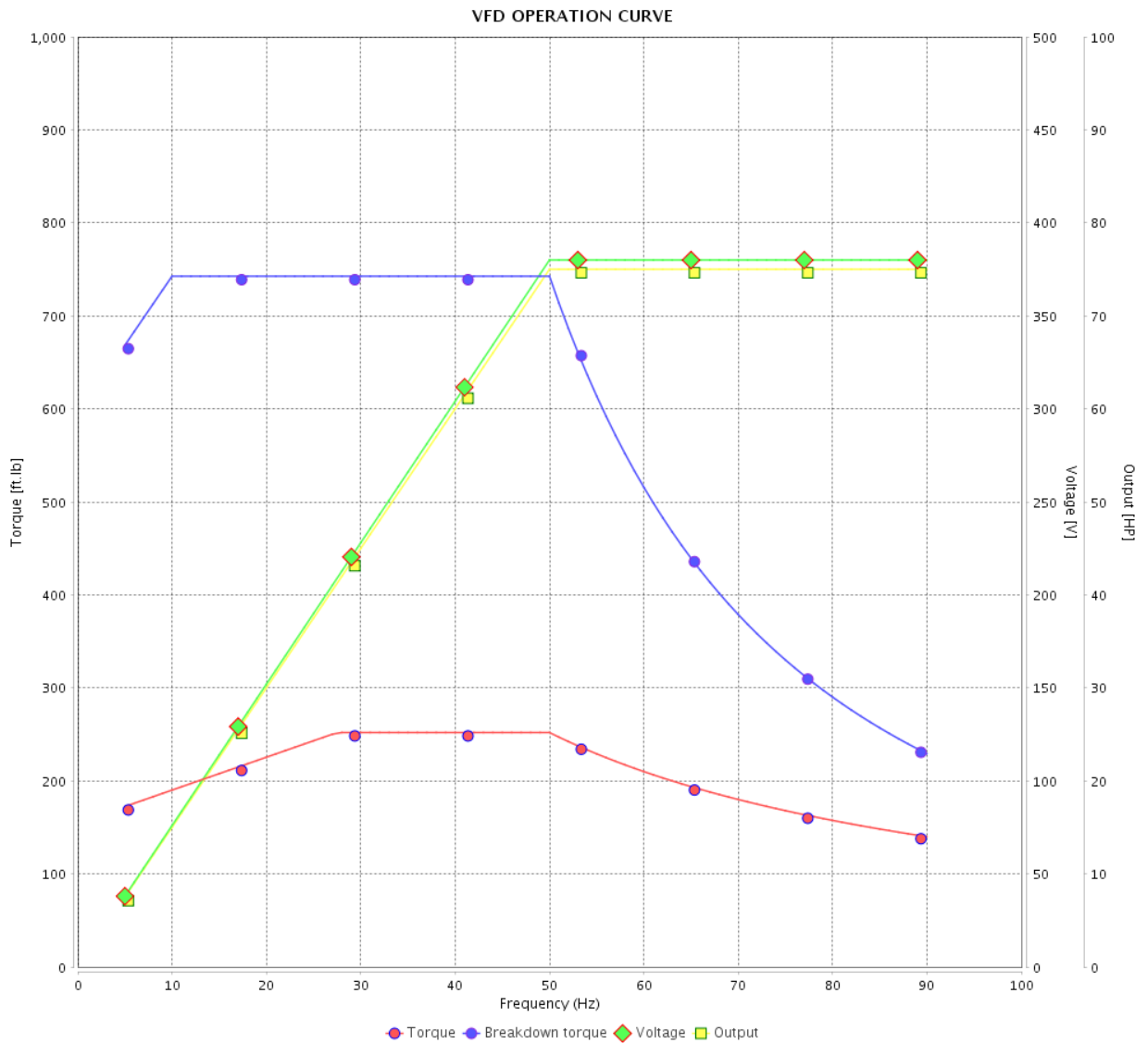


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 102 A
 LRC : 7.7
 Rated torque : 265 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 280 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



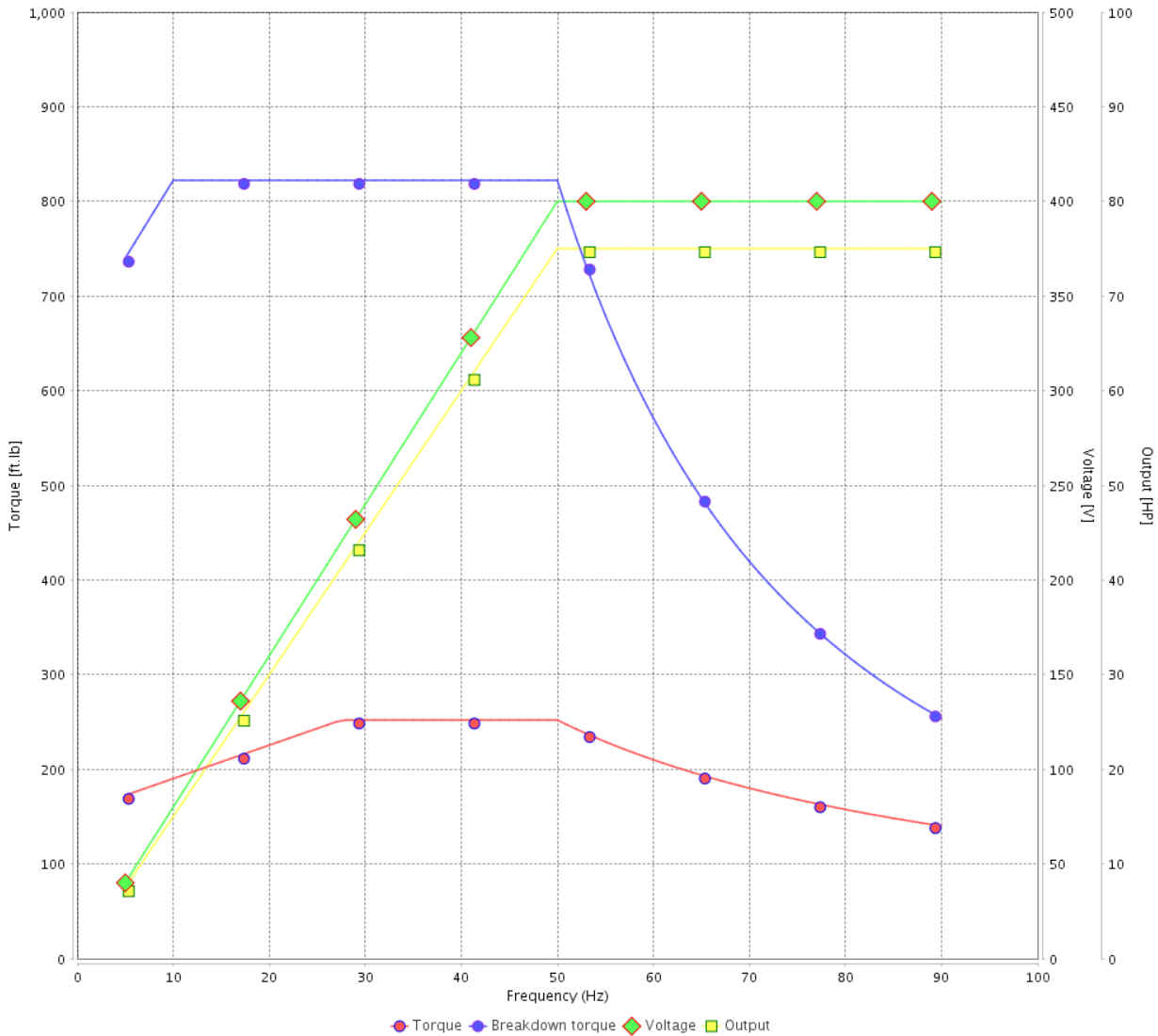
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 98.3 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 265 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

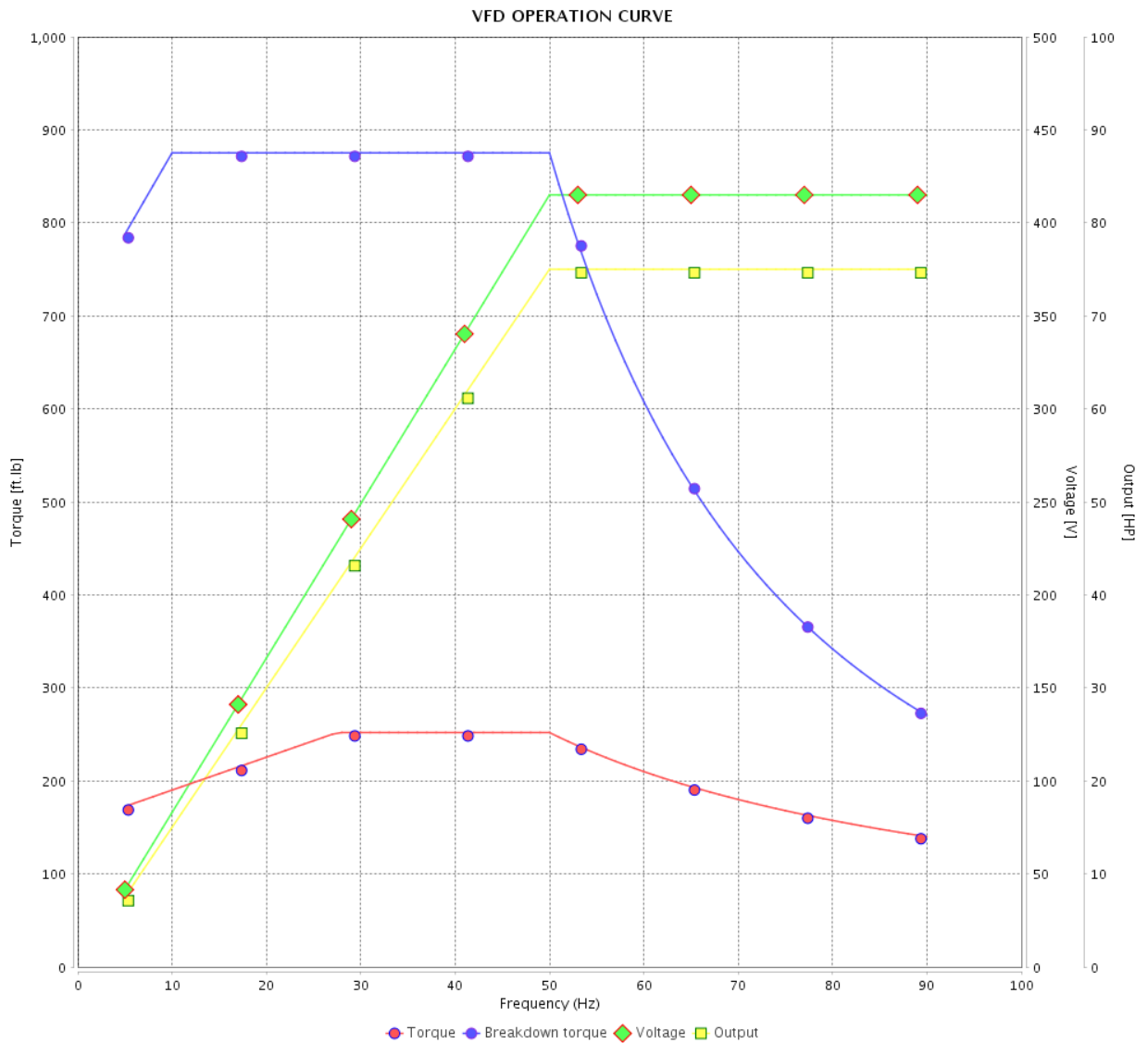


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 95.9 A
 LRC : 8.9
 Rated torque : 265 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 330 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



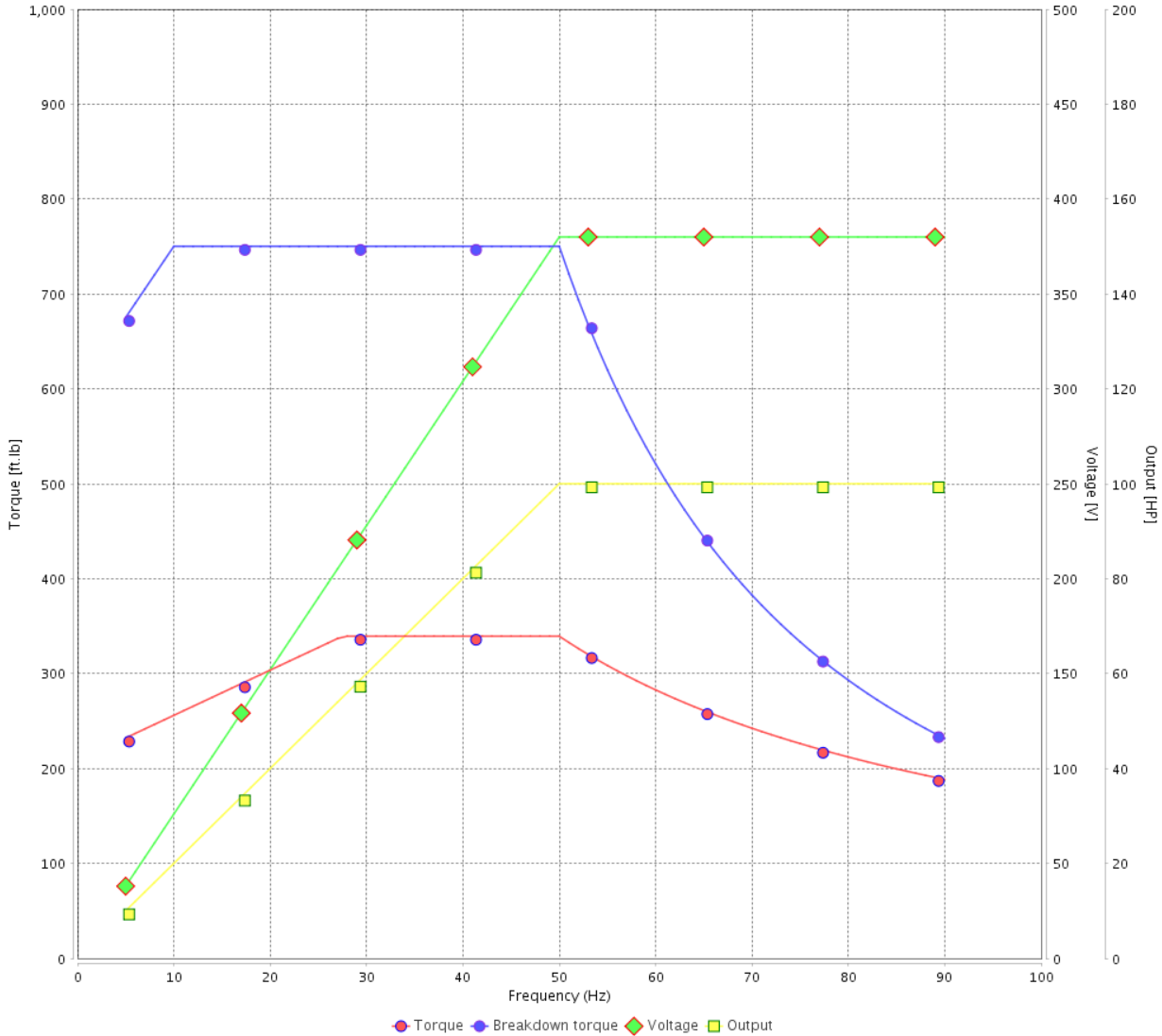
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current : 138 A
 LRC : 5.9
 Rated torque : 357 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 210 %
 Rated speed : 1470 rpm

Moment of inertia (J) : 29.9 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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Checked by				
Date				

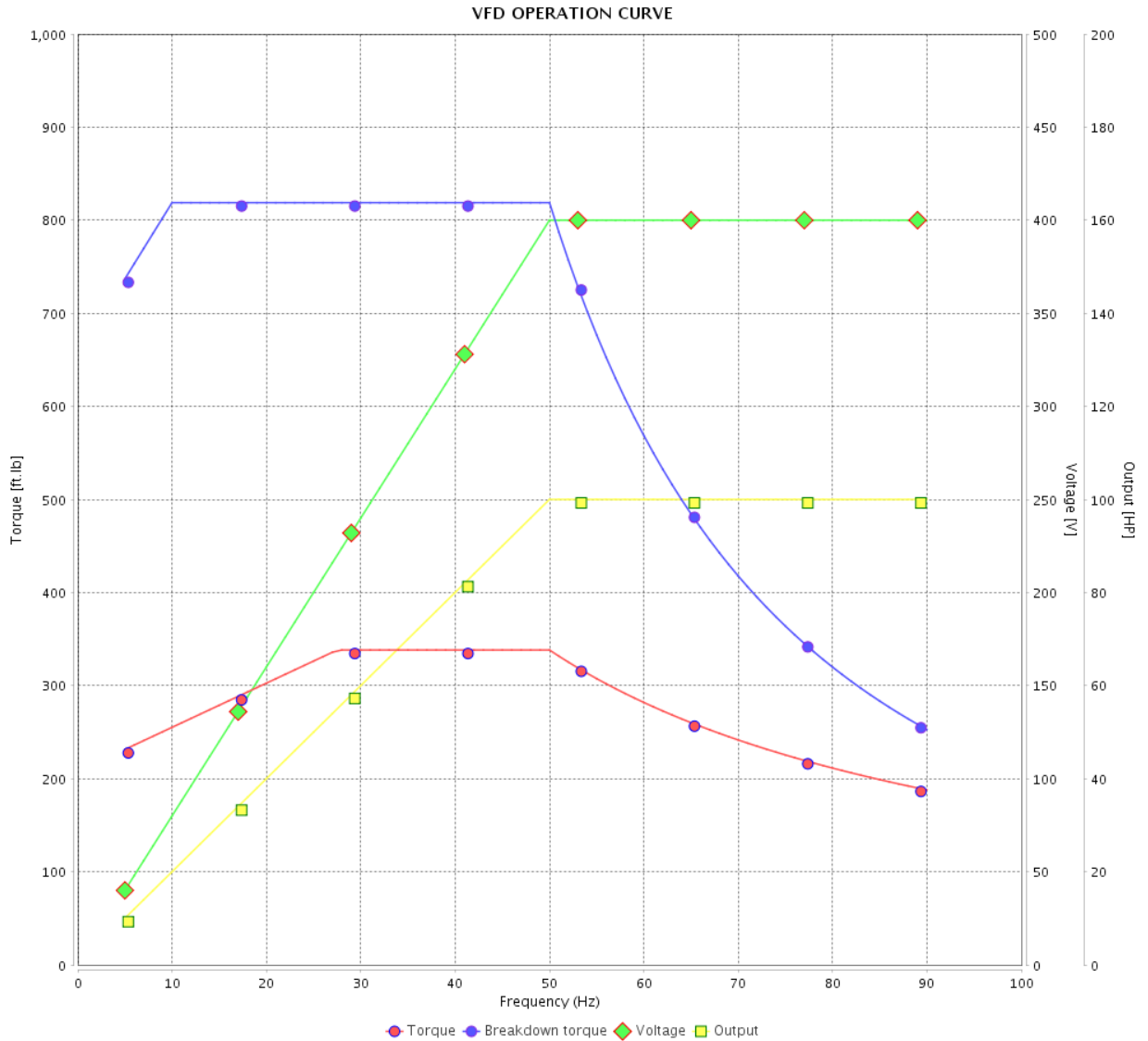
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12006668
 Catalog # : 10018ET3E405TC-W22



Performance : 400 V 50 Hz 4P IE2

Rated current : 131 A	Moment of inertia (J) : 29.9 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 356 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 105 K
Rated speed : 1475 rpm	Design : B

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Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



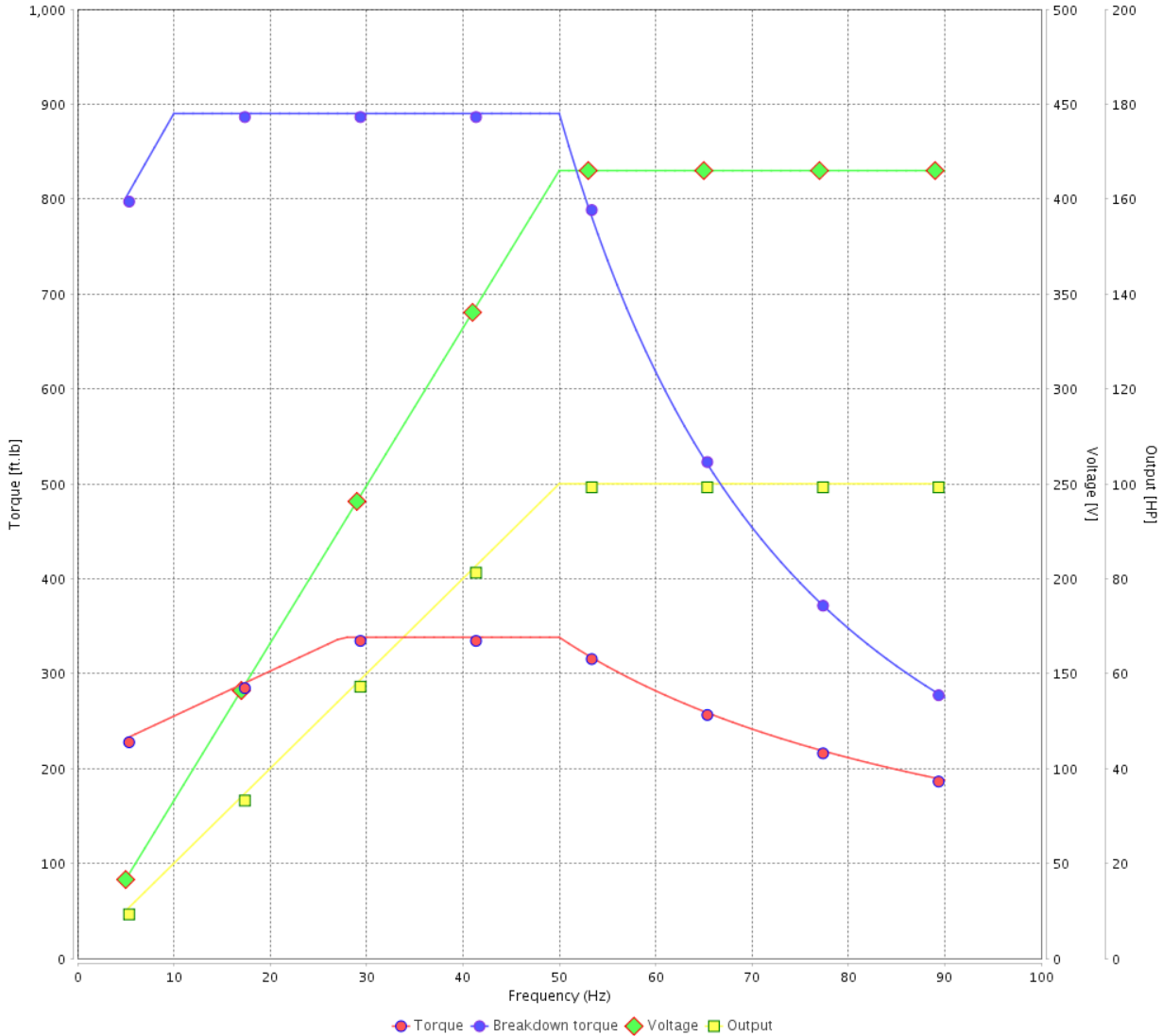
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12006668

Catalog # : 10018ET3E405TC-W22

VFD OPERATION CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current : 127 A
 LRC : 7.1
 Rated torque : 356 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 29.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

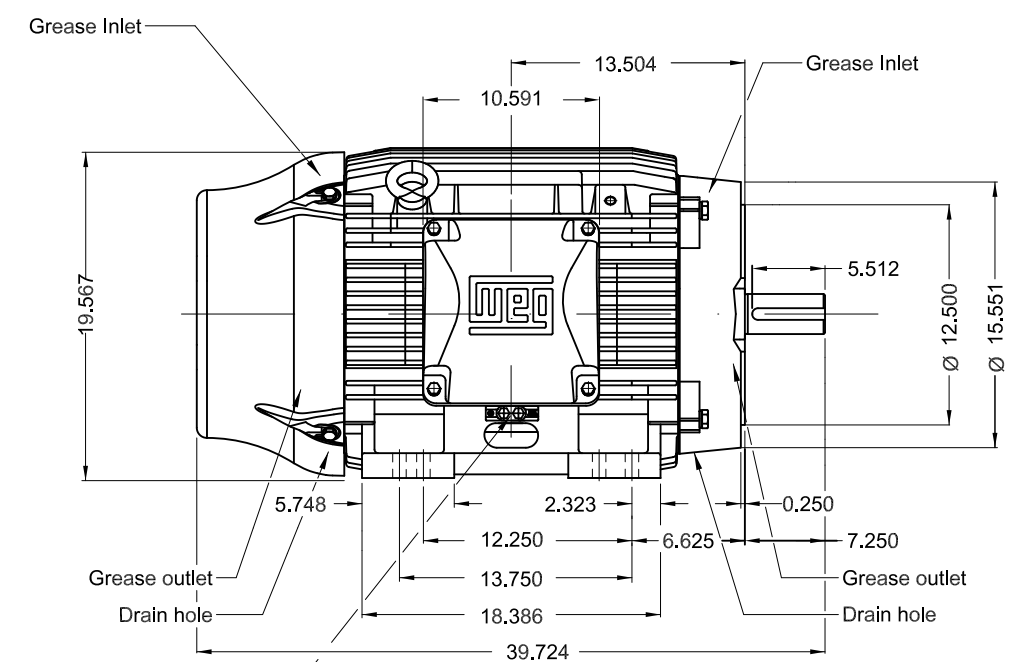
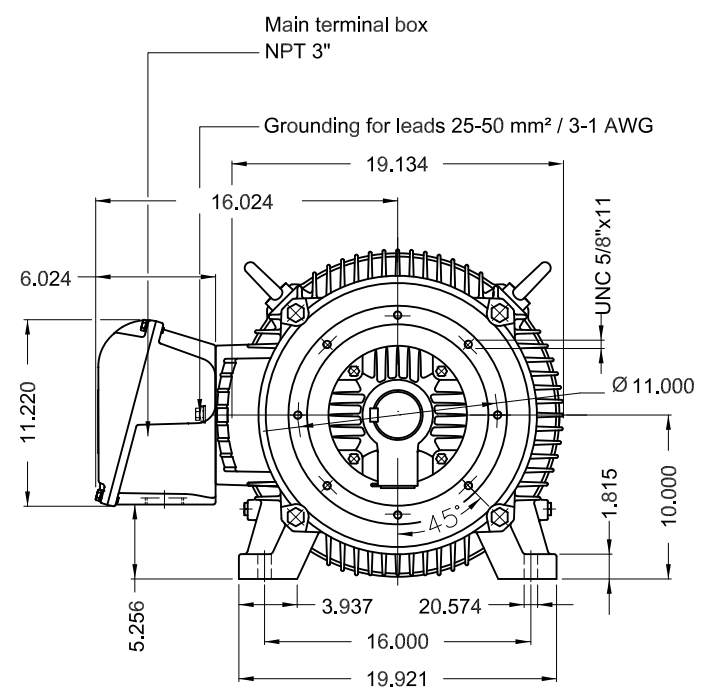
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				
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1 2 3 4 5 6

A

B

C

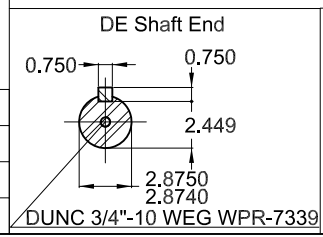


Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

Without vertical jackscrews
 Color RAL 5009
 Painting plan 203A
 Mounting B34R(D)



100 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 404/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD





FOR SAFE AREA
Mod.TE1BFOXON
CC029A



For use on 60Hz
Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 10018ET3E405TC-W22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 404/5TC 1000m.a.s.l. IP55 TEFC 1205lb

V 230/460

A 226/113

HP 100

kW 75

SF 1.25

SFA 283/141

RPM 1780

PF 0.87

AMB 40°C

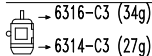
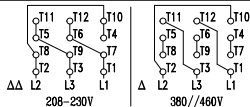
INS cl. F DT80K NEMA NOM EFF 95.4%

DUTY CONT.

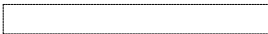
DES B Code H

USABLE @208V 245A SF 1.10 SFA 270

100HP 75kW 50Hz 380V 138A 1470RPM SF 1.00 EFF 93.6% (IE1)



MOBIL POLYREX EM (10000h)



MADE IN MEXICO
12006668