

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 12821976	
				Catalog # : 00512ET3ER215TC-W22	
Frame		: 215TC		Cooling method : IC411 - TEFC	
Insulation class		: F		Mounting : W-6	
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 : 172 lb	
Protection degree		: IP55		Moment of inertia (J) : 1.47 sq.ft.lb	
Design		: B			
Output [HP]	5	5	5	5	5
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	13.7/6.83	8.10	7.82	7.55	7.55
L. R. Amperes [A]	92.9/46.4	44.5	47.7	49.1	49.1
LRC [A]	6.8x(Code J)	5.5x(Code G)	6.1x(Code H)	6.5x(Code H)	6.5x(Code H)
No load current [A]	6.90/3.45	3.41	3.68	3.90	3.90
Rated speed [RPM]	1170	960	965	970	970
Slip [%]	2.50	4.00	3.50	3.00	3.00
Rated torque [ft.lb]	22.4	27.4	27.2	27.1	27.1
Locked rotor torque [%]	170	140	160	190	190
Breakdown torque [%]	260	200	229	250	250
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	102s (cold) 57s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)
Noise level ²	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)
Efficiency (%)	25%	88.2	89.8	89.1	87.2
	50%	88.5	88.5	88.5	87.5
	75%	89.5	88.5	88.5	88.5
	100%	89.5	86.8	87.5	88.5
Power Factor	25%	0.34	0.40	0.37	0.34
	50%	0.58	0.65	0.61	0.58
	75%	0.70	0.76	0.73	0.71
	100%	0.76	0.80	0.78	0.77
Bearing type		Drive end : 6308 ZZ	Non drive end : 6207 ZZ	Foundation loads	
Sealing		: V'Ring	: V'Ring	Max. traction : 296 lb	
Lubrication interval		: -	: -	Max. compression : 467 lb	
Lubricant amount		: -	: -		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 15.1A SF 1.15 SFA 17.4A					
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



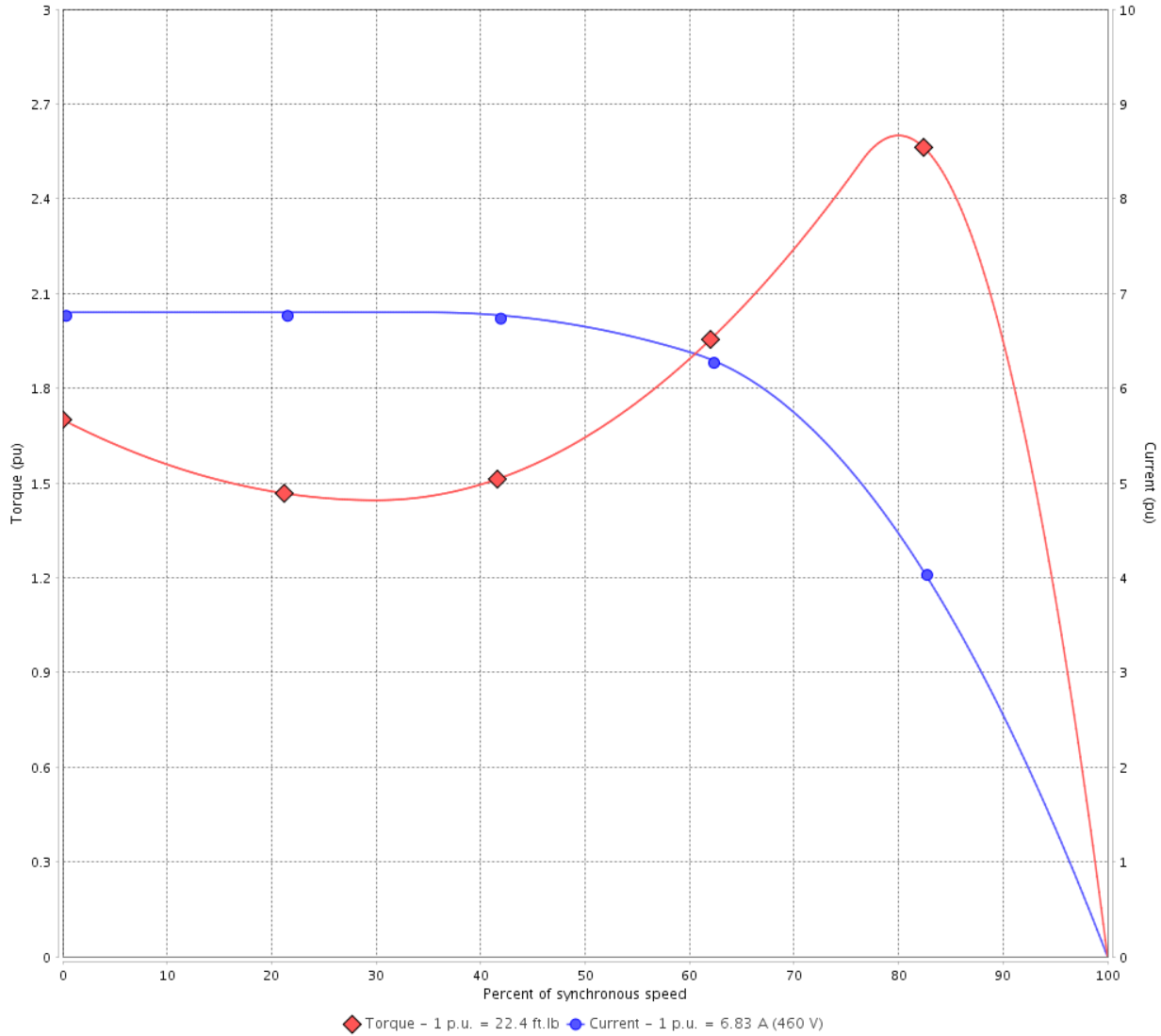
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821976

Catalog # : 00512ET3ER215TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 13.7/6.83 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Locked rotor time : 102s (cold) 57s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



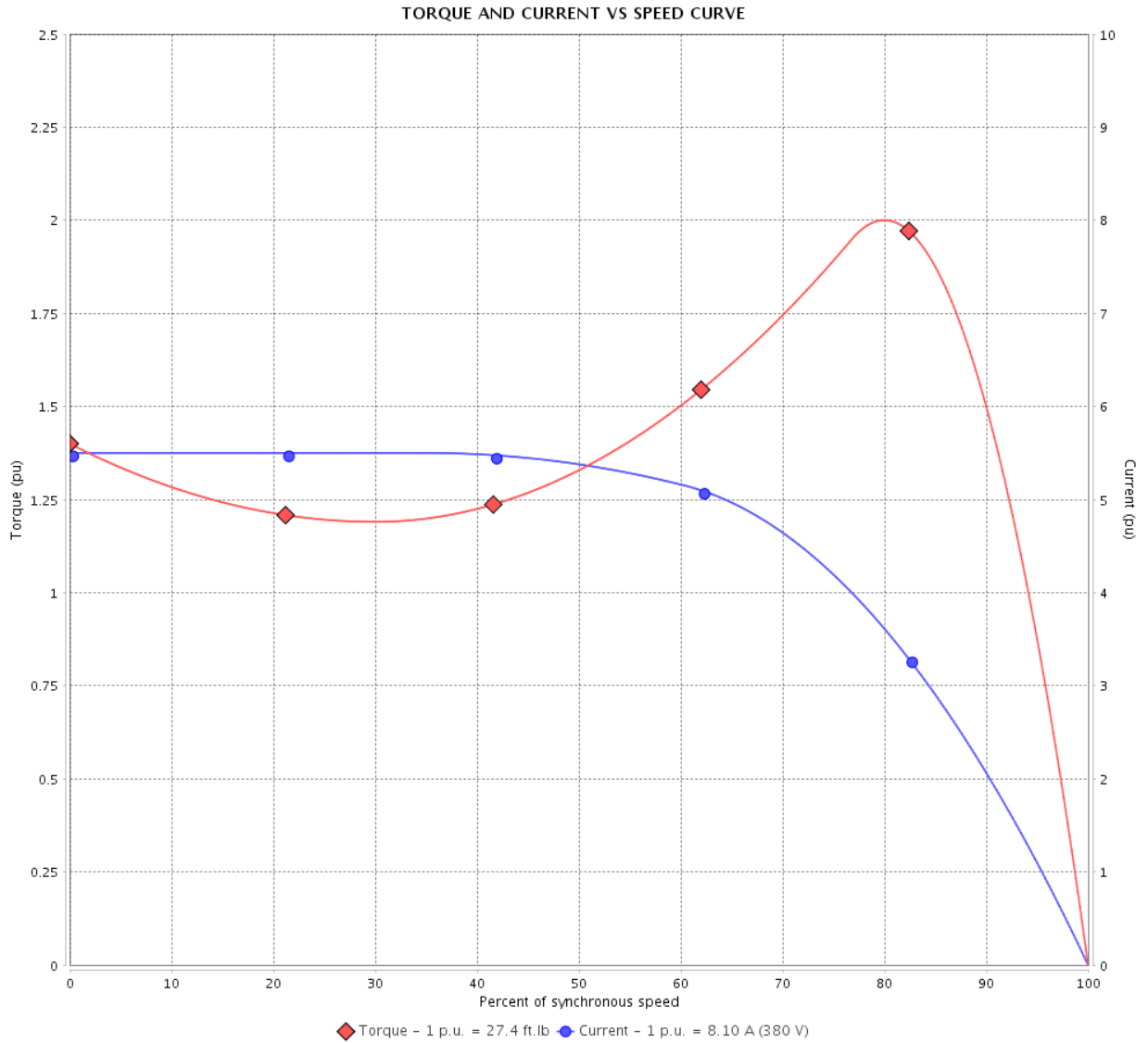
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821976

Catalog # : 00512ET3ER215TC-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A
 LRC : 5.5
 Rated torque : 27.4 ft.lb
 Locked rotor torque : 140 %
 Breakdown torque : 200 %
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



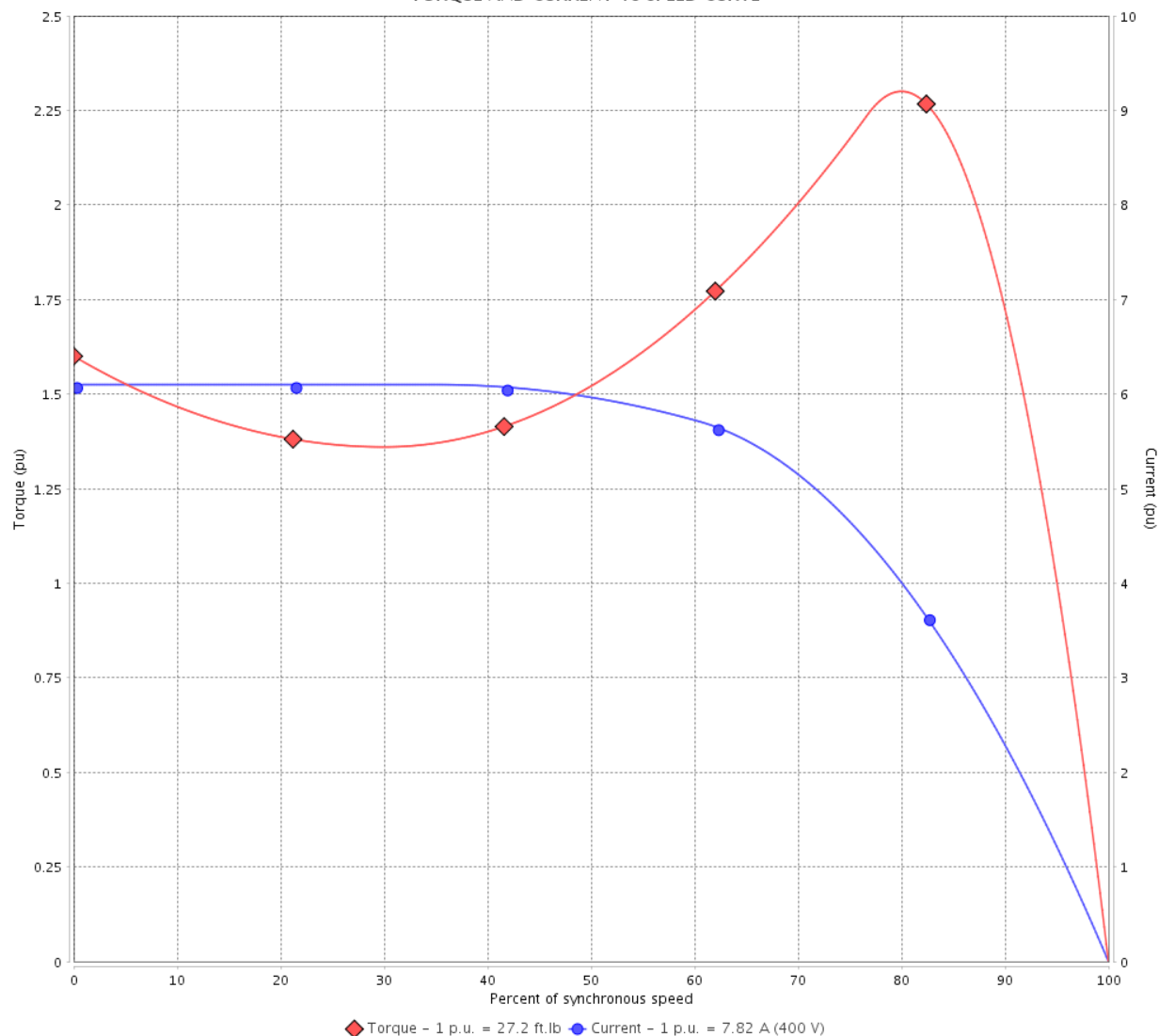
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821976

Catalog # : 00512ET3ER215TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



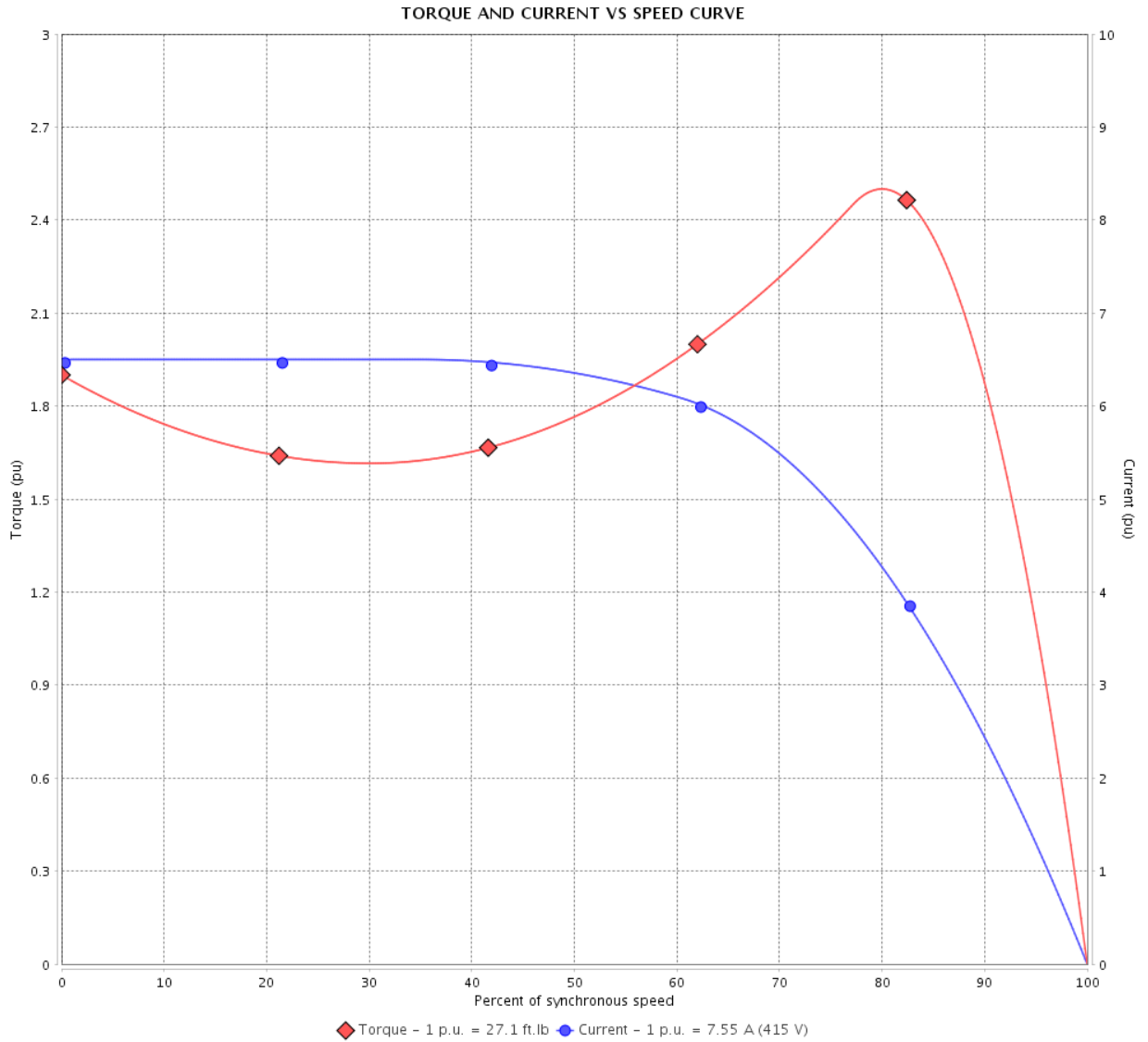
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Customer :

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Product code : 12821976

Catalog # : 00512ET3ER215TC-W22



Performance : 415 V 50 Hz 6P IE3

Rated current	: 7.55 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



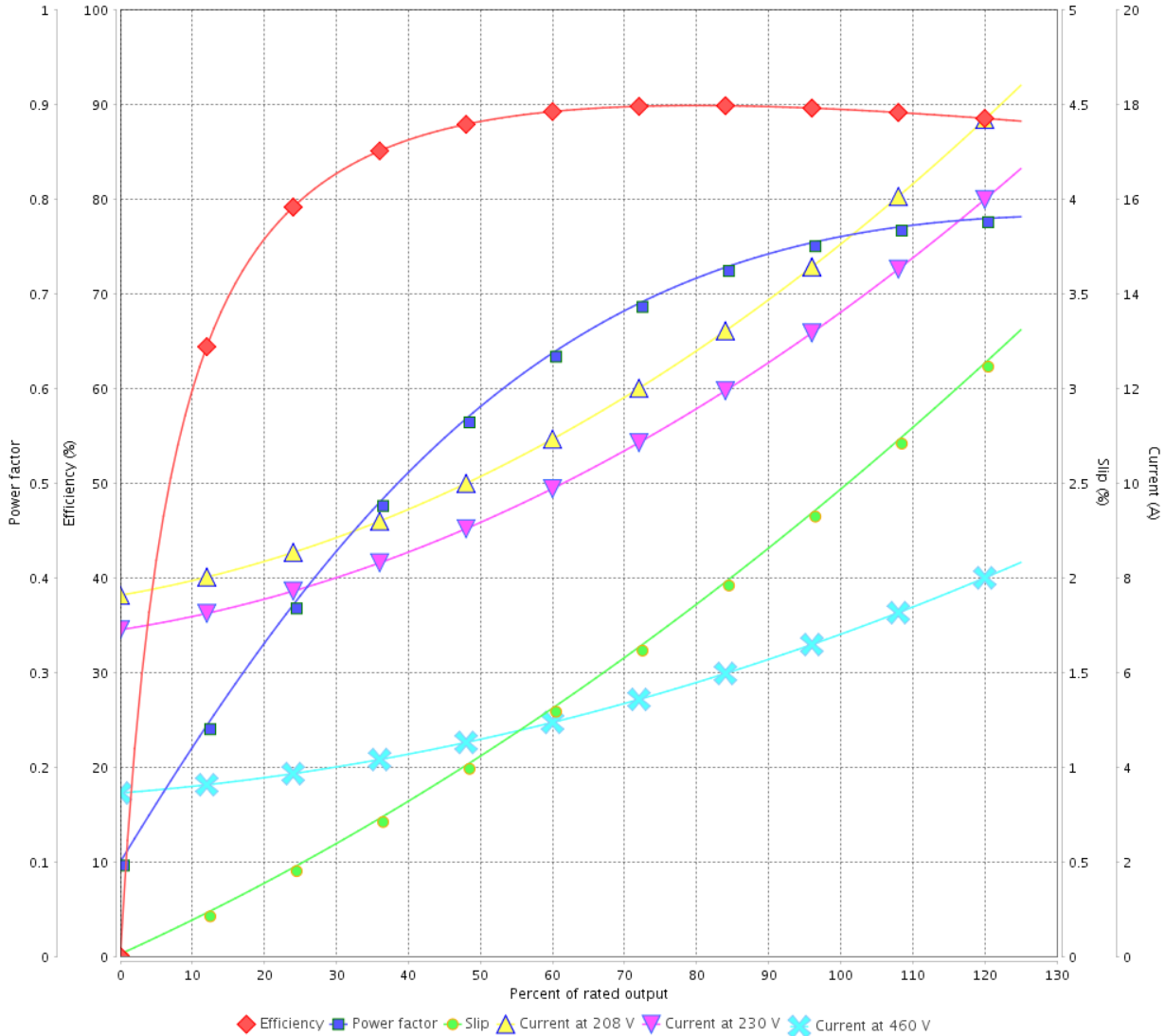
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821976

Catalog # : 00512ET3ER215TC-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.7/6.83 A
 LRC : 6.8
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 260 %
 Rated speed : 1170 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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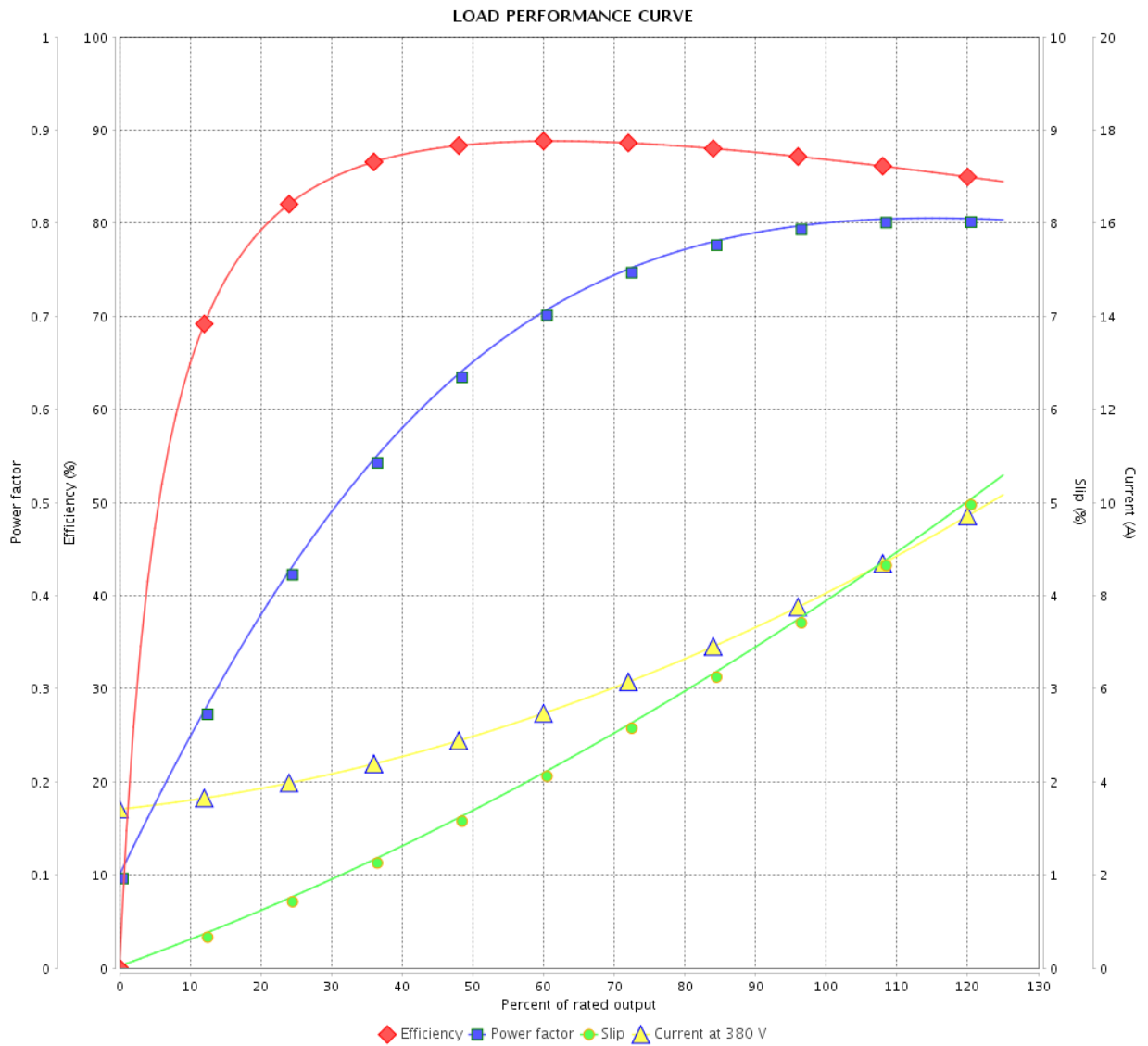


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Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A
 LRC : 5.5
 Rated torque : 27.4 ft.lb
 Locked rotor torque : 140 %
 Breakdown torque : 200 %
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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LOAD PERFORMANCE CURVE

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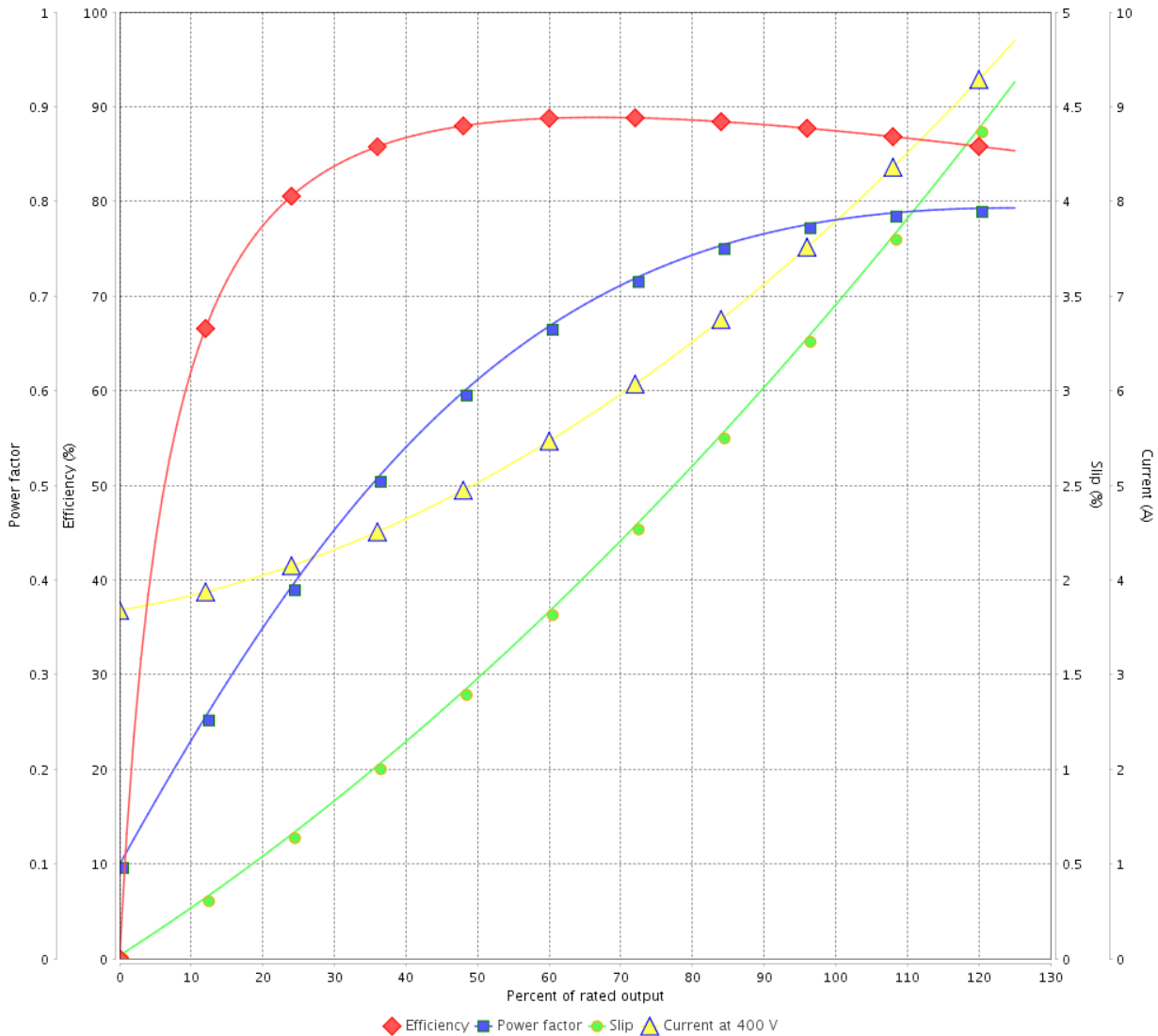
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

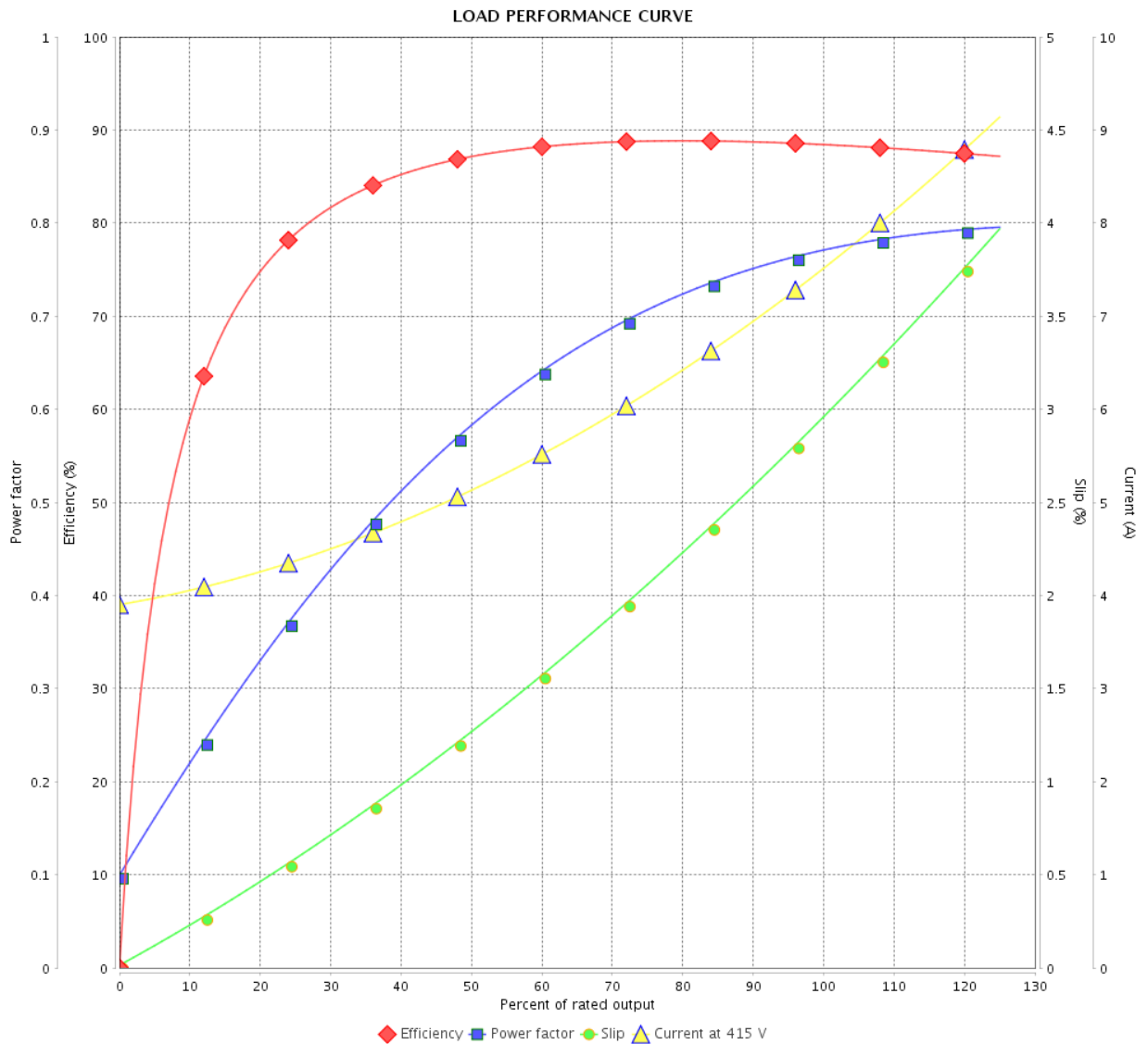


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Performance : 415 V 50 Hz 6P IE3

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 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 970 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE

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LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Heating constant

Cooling constant

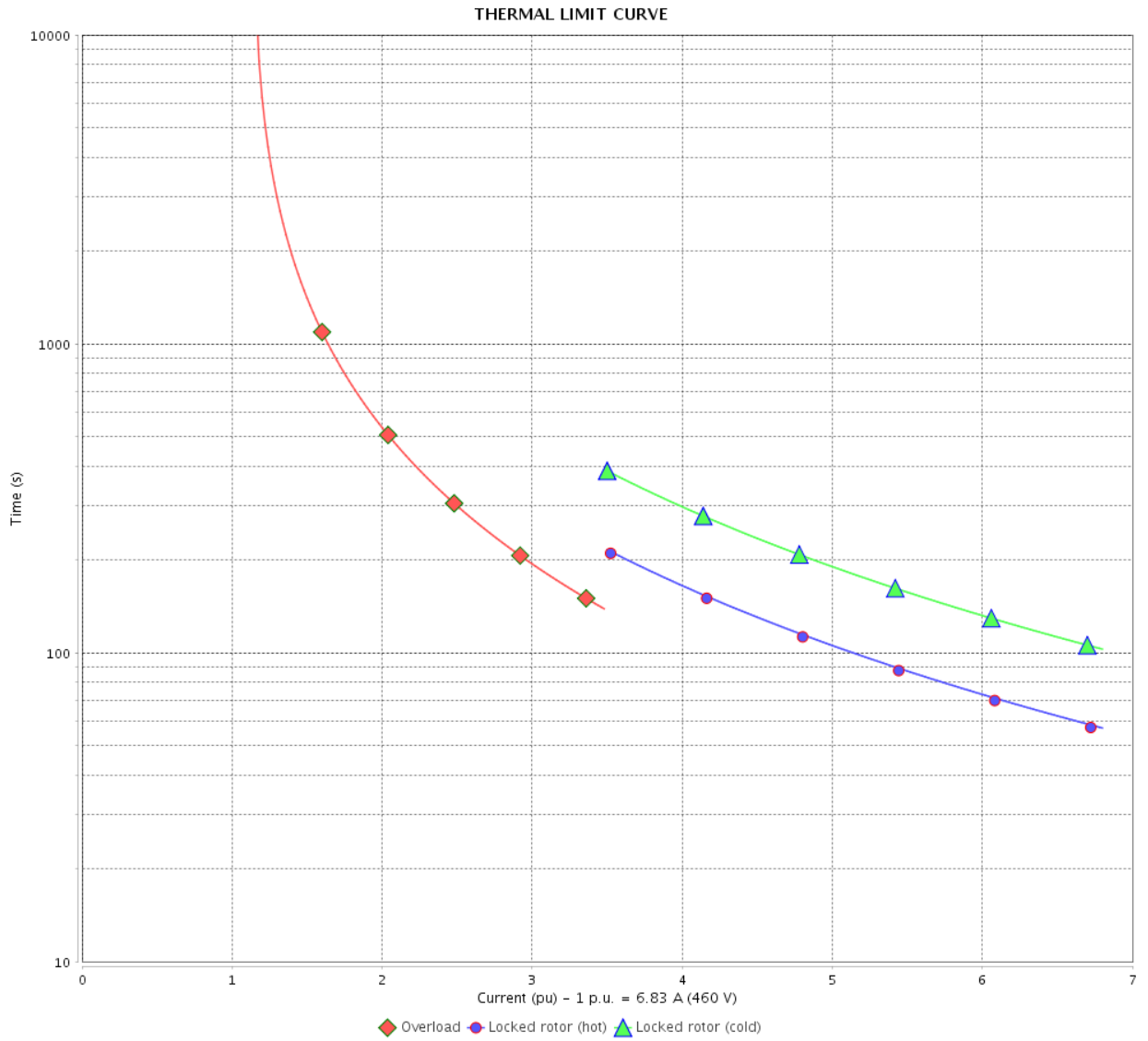
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THERMAL LIMIT CURVE

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Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Performance : 380 V 50 Hz 6P IE3

Rated current	: 8.10 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.4 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Heating constant

Cooling constant

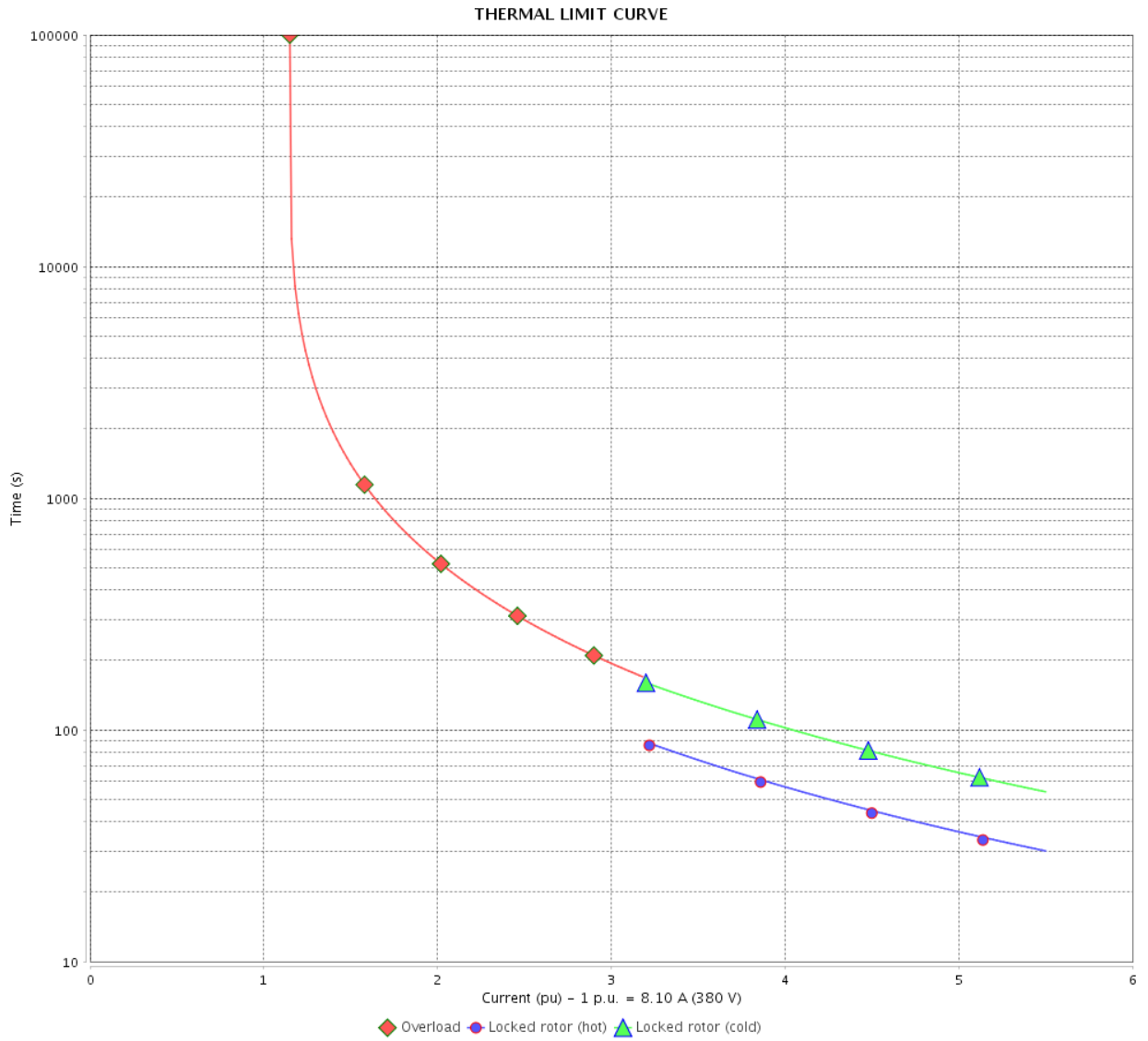
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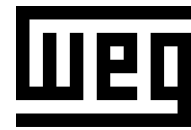


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Three Phase Induction Motor - Squirrel Cage

Customer :

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 Product code : 12821976
 Catalog # : 00512ET3ER215TC-W22

Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A	Moment of inertia (J) : 1.47 sq.ft.lb
LRC : 6.1	Duty cycle : Cont.(S1)
Rated torque : 27.2 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 965 rpm	Design : B

Heating constant

Cooling constant

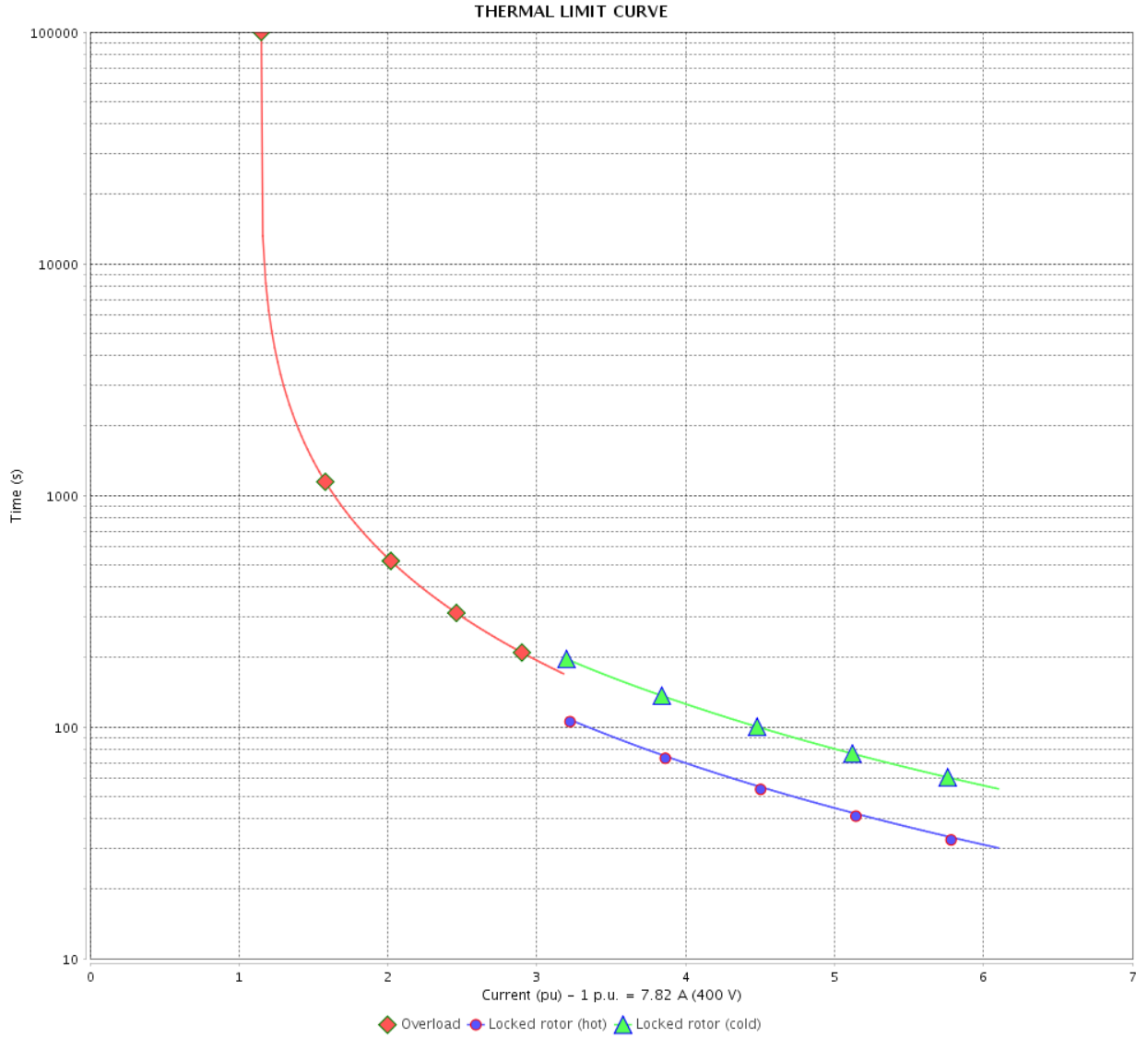
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Date	12/04/2022			

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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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 Product code : 12821976
 Catalog # : 00512ET3ER215TC-W22

Performance : 415 V 50 Hz 6P IE3

Rated current : 7.55 A	Moment of inertia (J) : 1.47 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 27.1 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 970 rpm	Design : B

Heating constant

Cooling constant

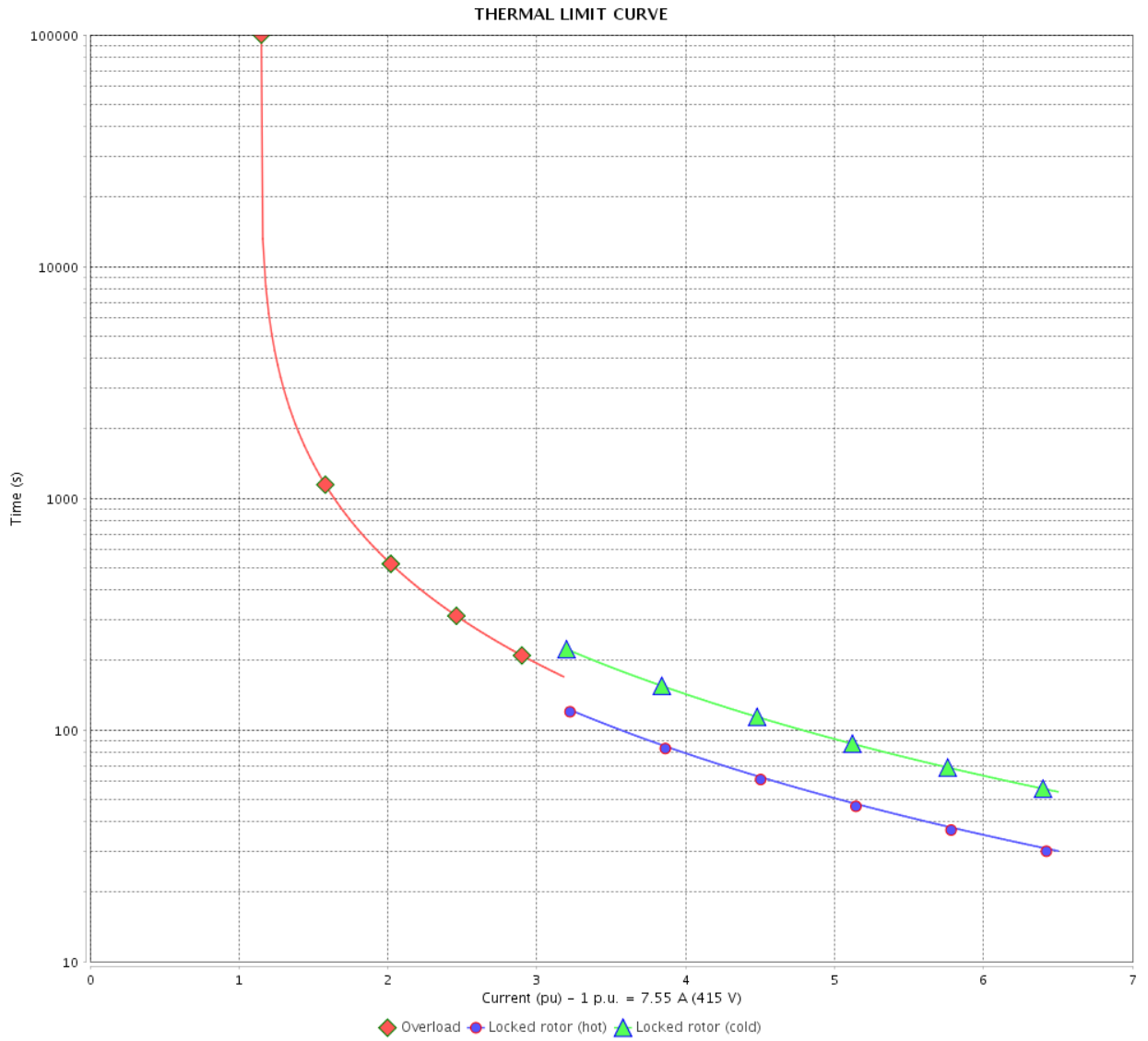
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Date	12/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



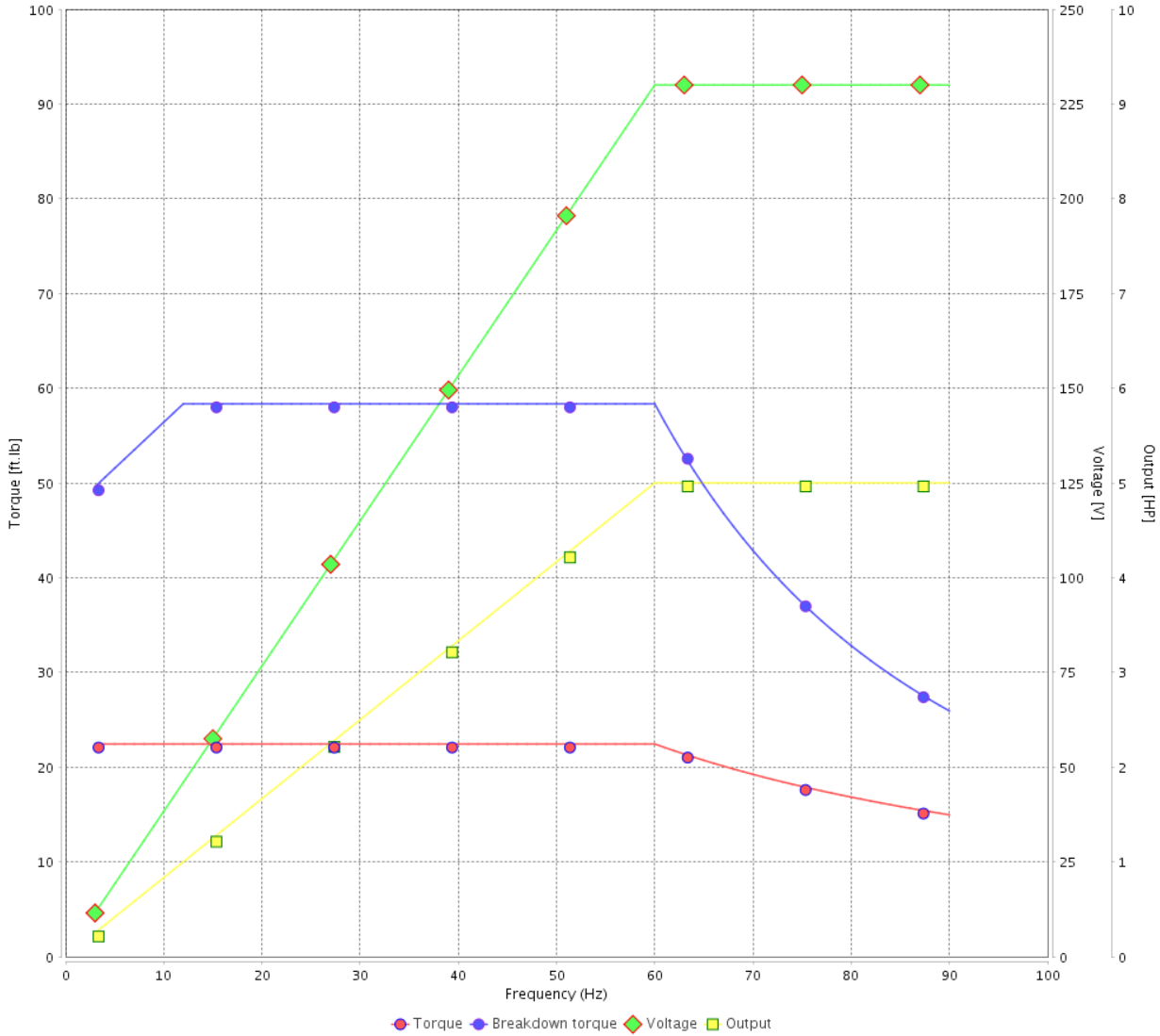
Customer :

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Product code : 12821976

Catalog # : 00512ET3ER215TC-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.7/6.83 A
 LRC : 6.8
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 260 %
 Rated speed : 1170 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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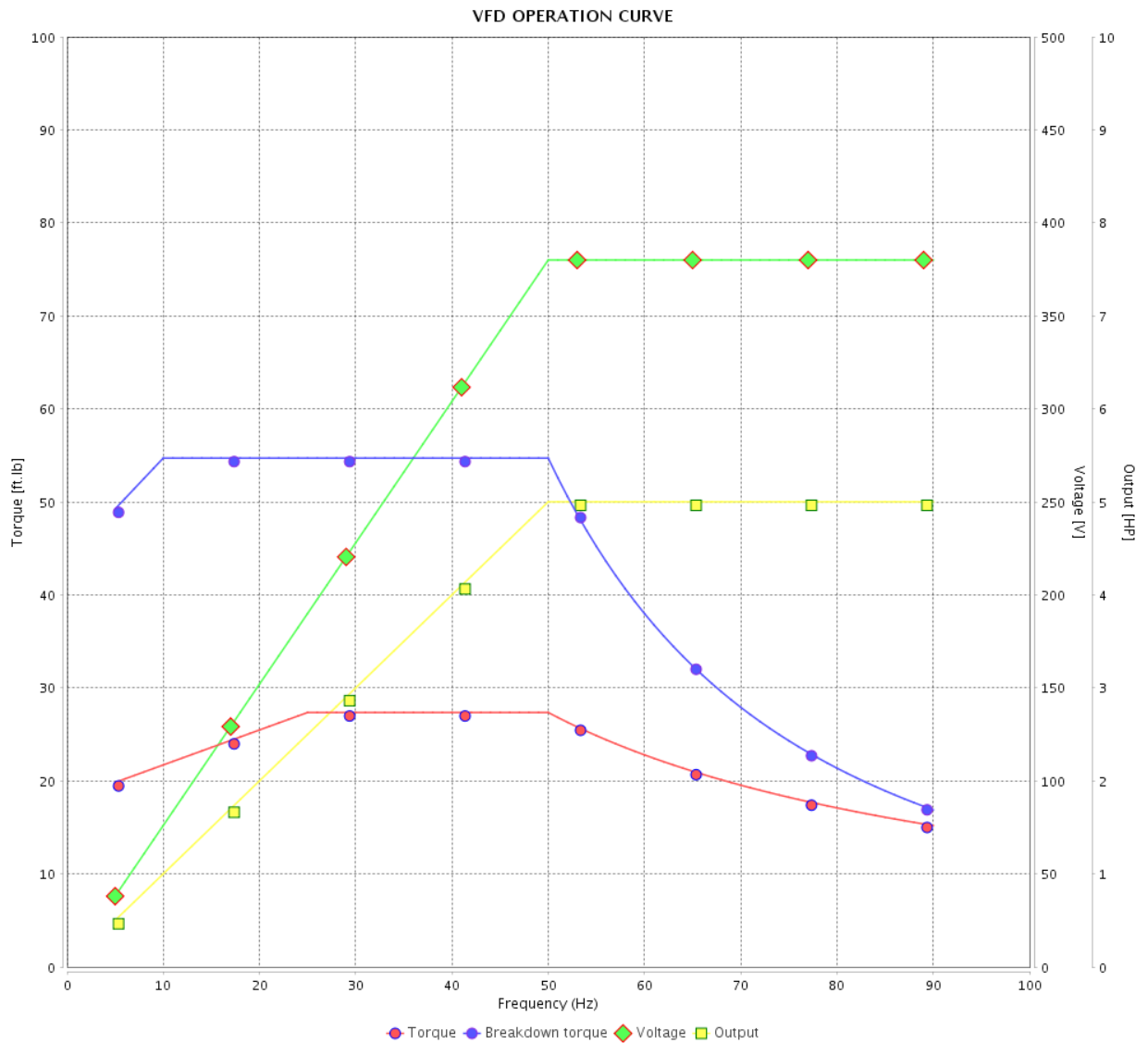
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12821976
 Catalog # : 00512ET3ER215TC-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A	Moment of inertia (J) : 1.47 sq.ft.lb
LRC : 5.5	Duty cycle : Cont.(S1)
Rated torque : 27.4 ft.lb	Insulation class : F
Locked rotor torque : 140 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 960 rpm	Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



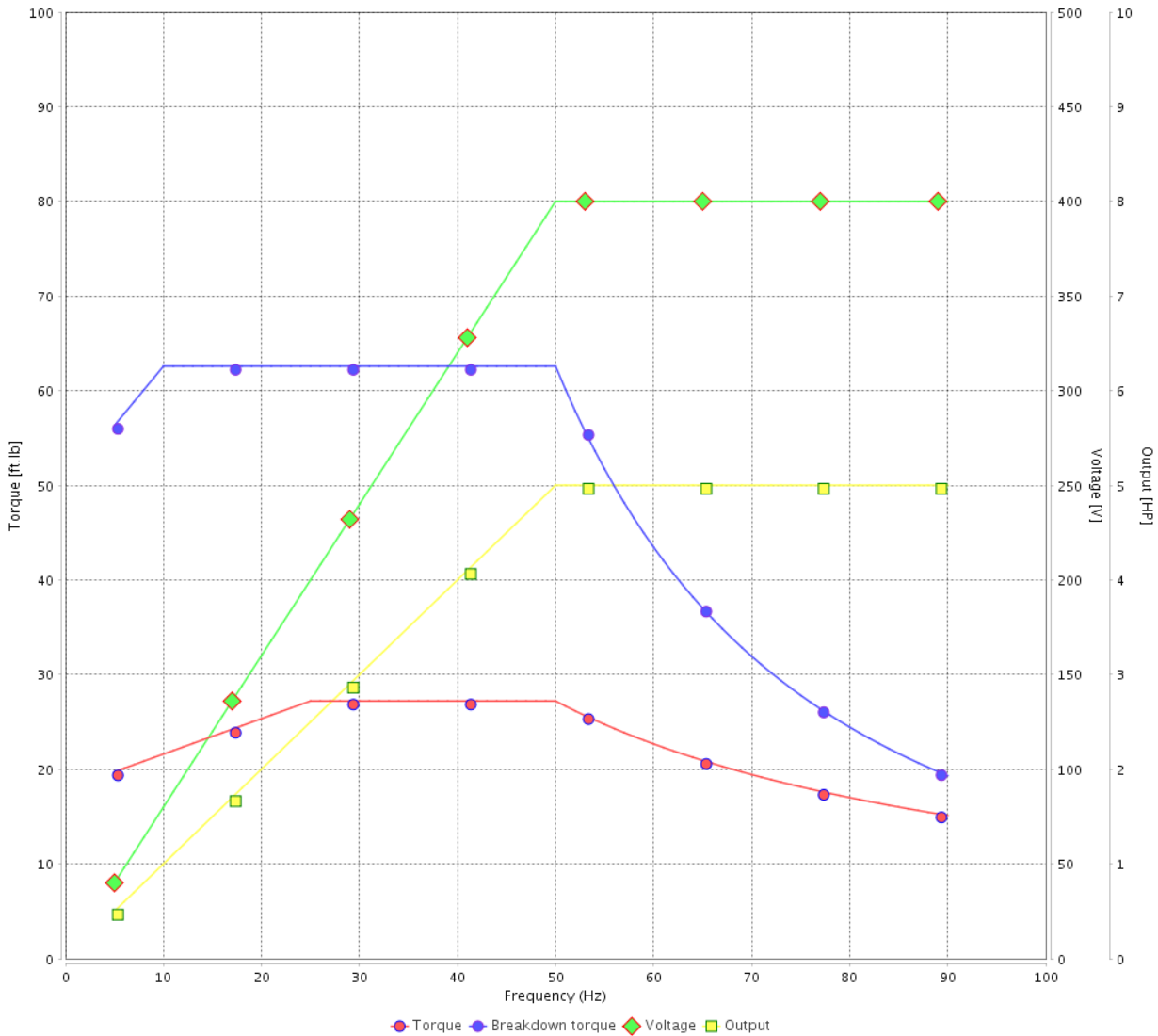
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A
 LRC : 6.1
 Rated torque : 27.2 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 229 %
 Rated speed : 965 rpm

Moment of inertia (J) : 1.47 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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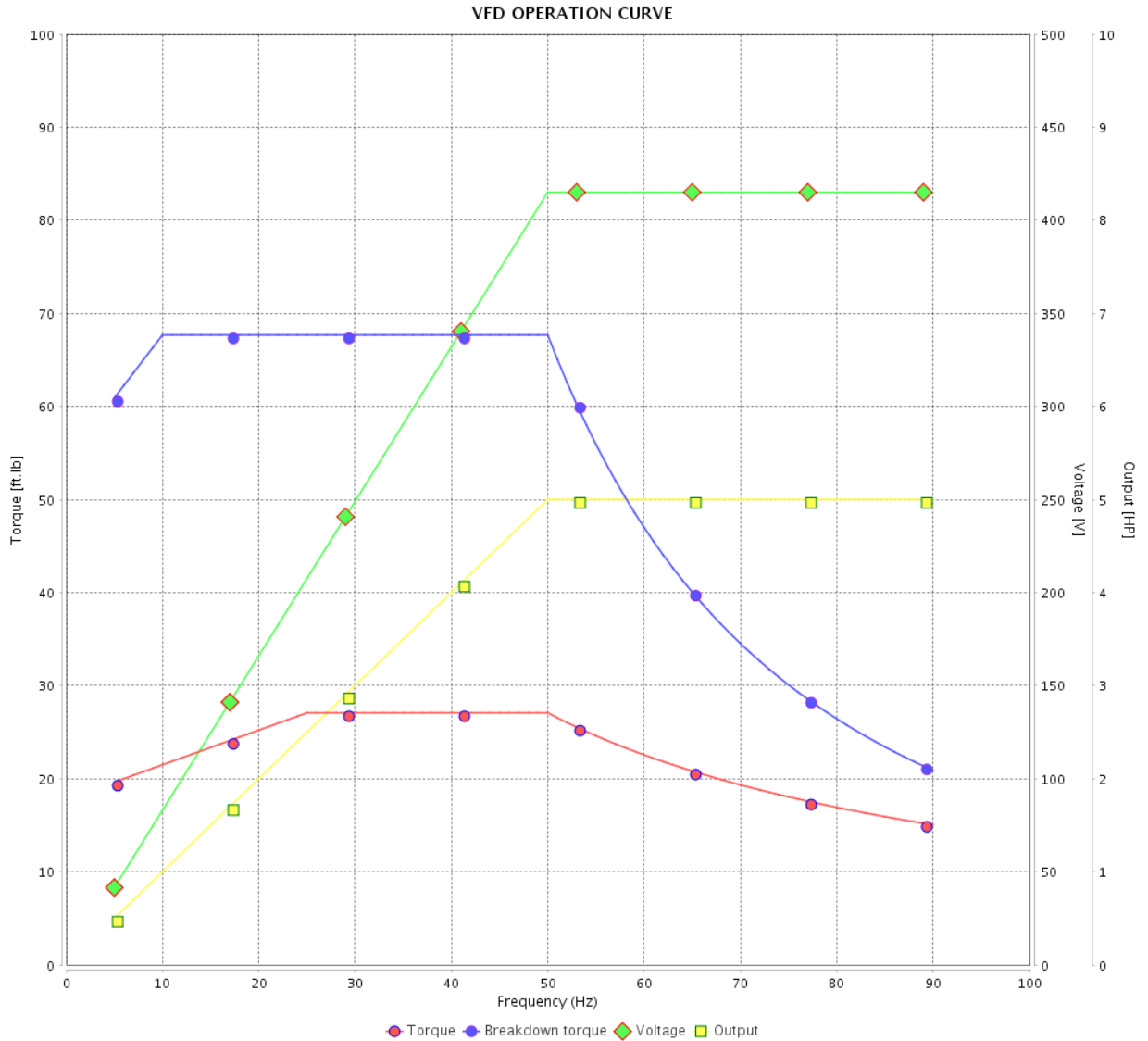
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

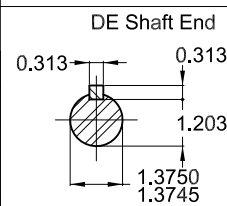
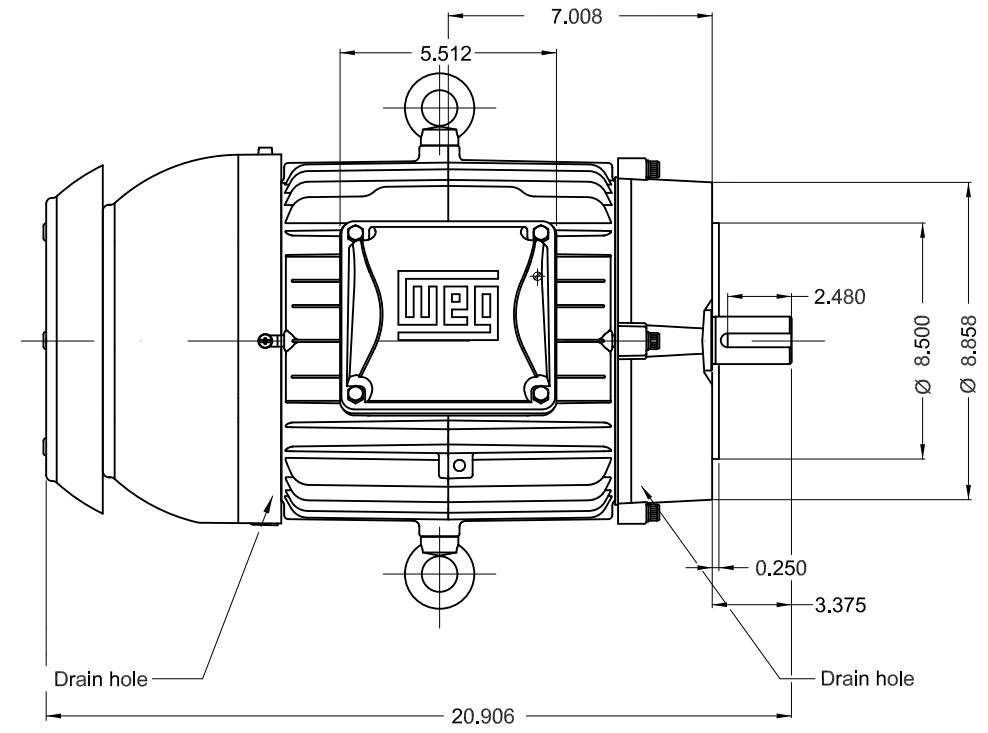
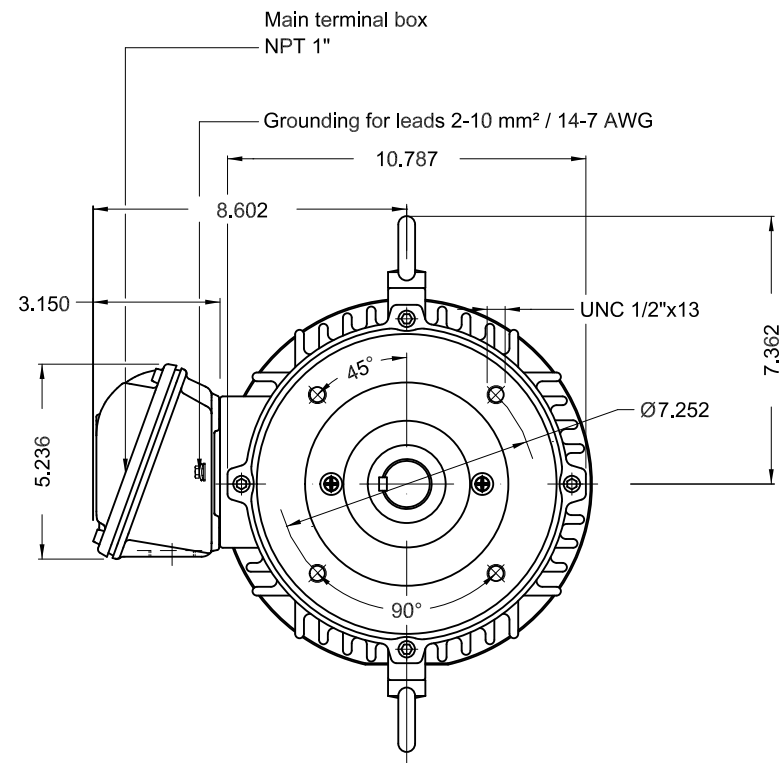
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Rated torque : 27.1 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 970 rpm	Design : B

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Bearing cap
Color RAL 5009
Painting plan 207A
Mounting NEMA W-6
Mounting V18

5 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF. FRAME 215TC IP55 TEFC					
CHECKED							
RELEASED							
REL DT.							
	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1			

PREVIEW
WDD



MADE IN BRAZIL
12821976



MODEL 00512ET3ER215TC-W22

Inverter Duty Motor
Severe Duty



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



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 215TC 1000m.a.s.l. IP55 TEFC 176lb

V 230/460

A 13.7/6.83

HP 5.0

kW 3.7

SF 1.25

SFA 17.1/8.54

RPM 1170

PF 0.76

AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 89.5%

DUTY CONT.

DES B Code J

USABLE @208V 15.1A SF 1.15 SFA 17.4

5.0HP 3.7kW 50Hz 380V 8.10A 960RPM SF 1.00 EFF 86.8% (IE3)

