

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14276311		
		Catalog # :	00218XT3ER145TC		
Frame	: 143/5TC	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	: 73.5 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.1595 sq.ft.lb		
Design	: B				
Output [HP]	2	2	2	2	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	5.58/2.79	3.29	3.18	3.18	
L. R. Amperes [A]	49.7/24.8	25.0	24.8	24.8	
LRC [A]	8.9x(Code L)	7.6x(Code K)	7.8x(Code K)	7.8x(Code K)	
No load current [A]	3.20/1.60	1.60	1.80	2.00	
Rated speed [RPM]	1750	1425	1435	1445	
Slip [%]	2.78	5.00	4.33	3.67	
Rated torque [ft.lb]	6.00	7.37	7.32	7.27	
Locked rotor torque [%]	270	190	220	240	
Breakdown torque [%]	320	220	250	270	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	19s (cold) 11s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	
Noise level ²	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	82.9	85.0	82.1	82.1
	50%	84.0	84.0	82.5	82.5
	75%	85.5	84.0	84.0	84.0
	100%	86.5	82.5	84.0	84.0
Power Factor	25%	0.32	0.38	0.34	0.31
	50%	0.56	0.64	0.59	0.55
	75%	0.70	0.77	0.73	0.69
	100%	0.78	0.84	0.81	0.78
Bearing type	: Drive end : 6205 2RS Non drive end : 6204 2RS	Foundation loads	Max. traction : 134 lb Max. compression : 207 lb		
Sealing	: Oil Seal Lip Seal				
Lubrication interval	: - -				
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 6.02A SF 1.15 SFA 6.92A					
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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Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



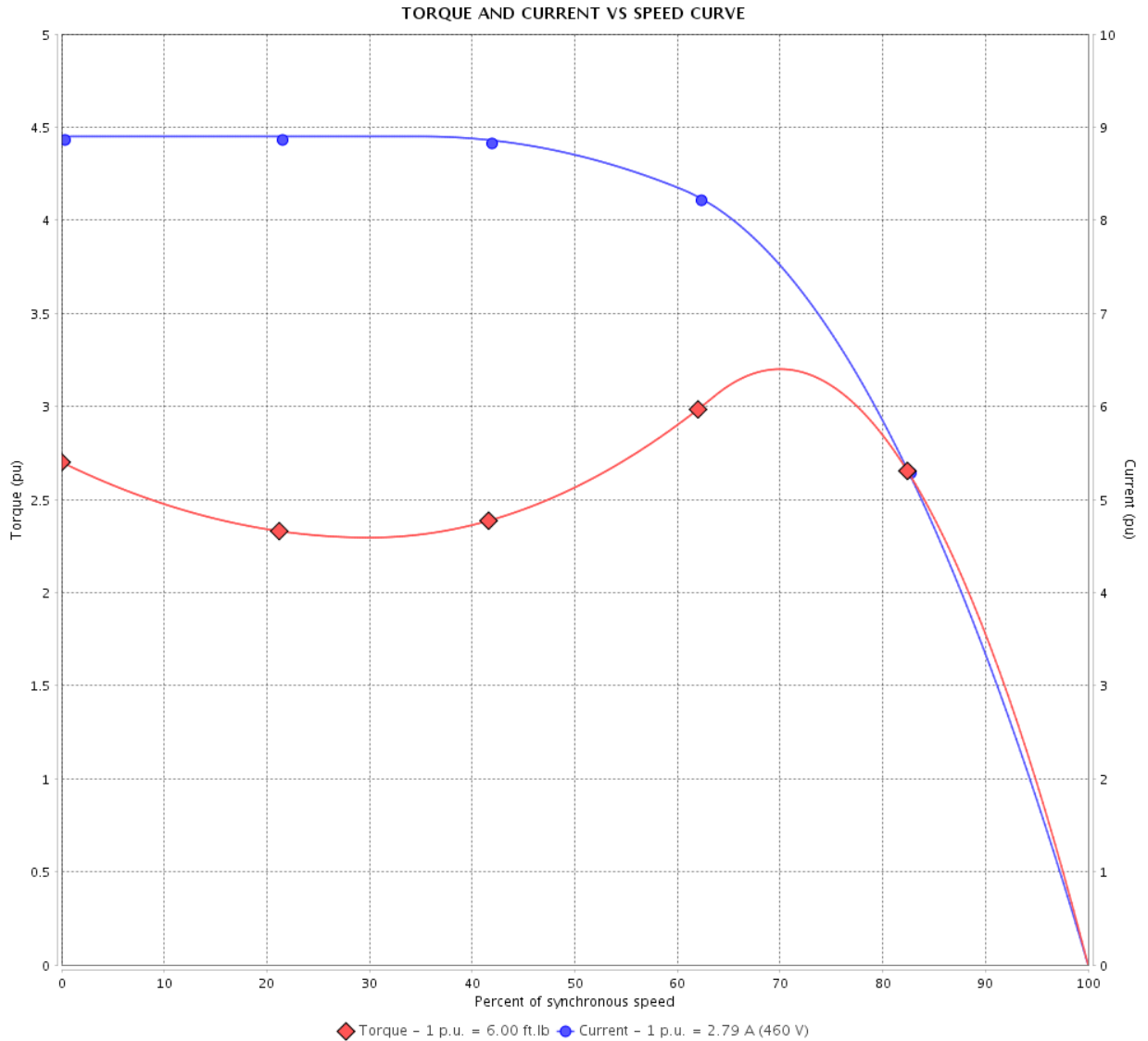
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14276311

Catalog # : 00218XT3ER145TC



Performance : 230/460 V 60 Hz 4P

Rated current : 5.58/2.79 A
 LRC : 8.9
 Rated torque : 6.00 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 320 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 19s (cold) 11s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



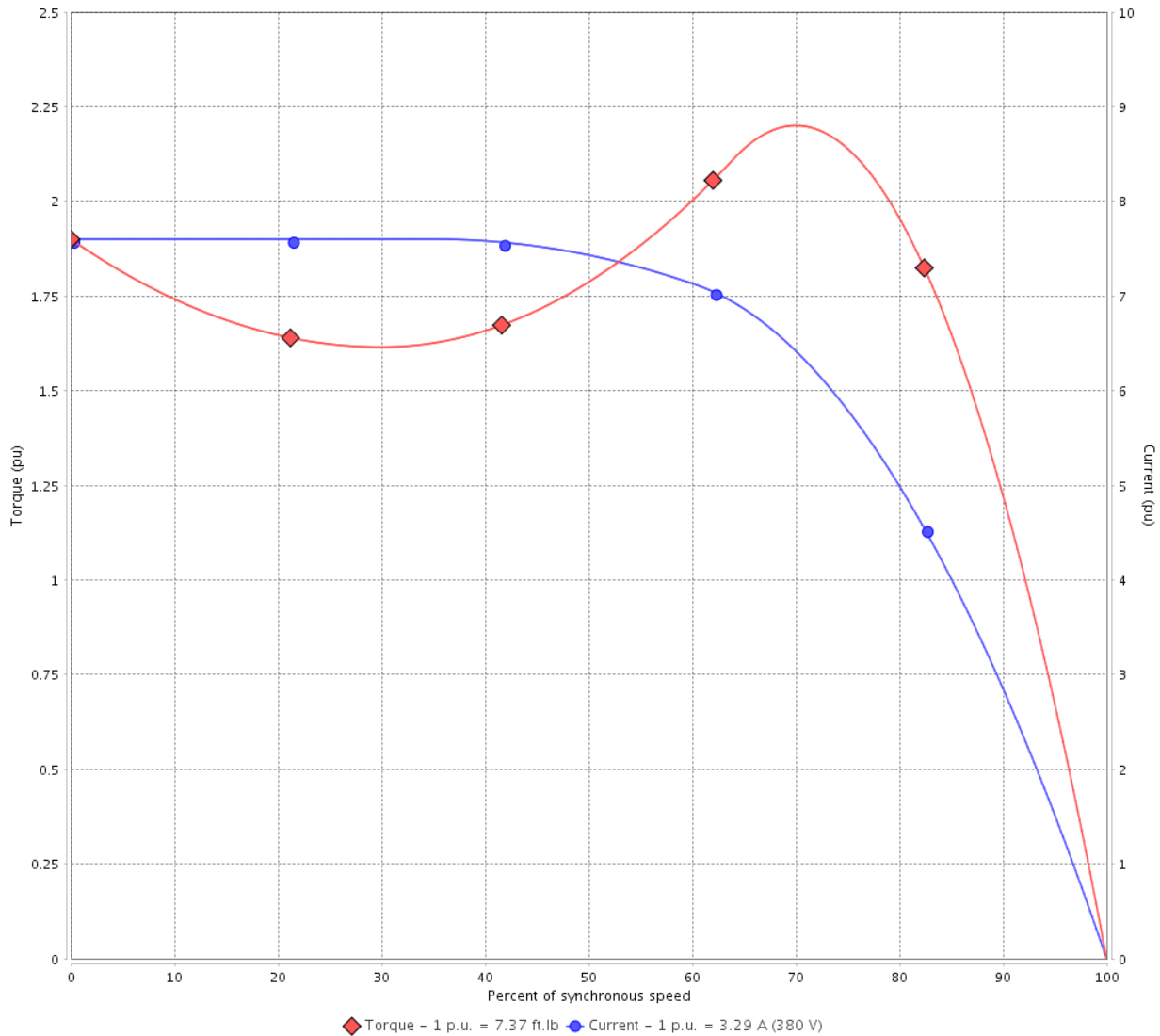
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Product line : NEMA Premium Efficiency Three-Phase

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 3.29 A	Moment of inertia (J)	: 0.1595 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 7.37 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1425 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



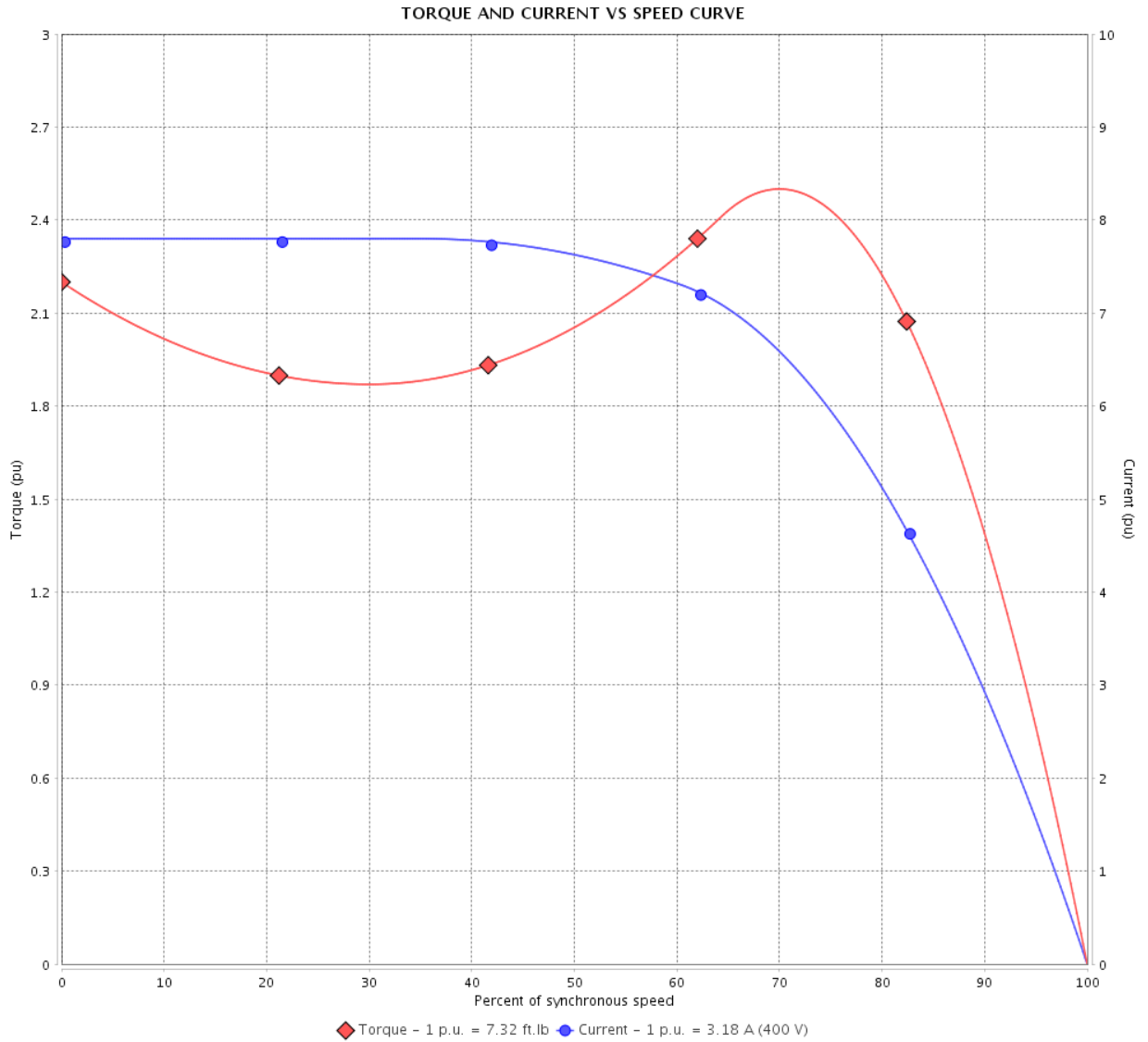
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14276311

Catalog # : 00218XT3ER145TC



Performance : 400 V 50 Hz 4P IE2

Rated current	: 3.18 A	Moment of inertia (J)	: 0.1595 sq.ft.lb
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 7.32 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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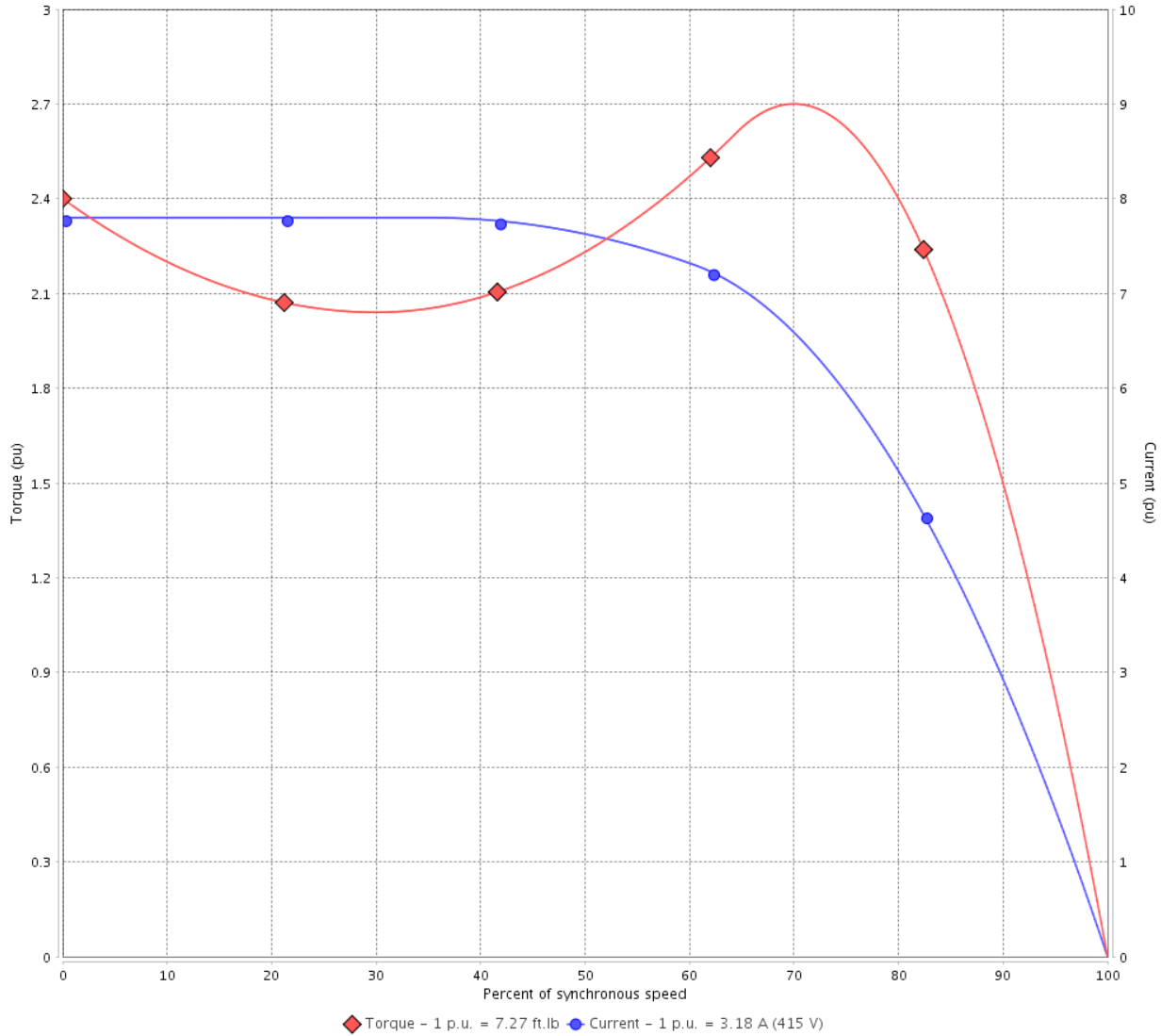
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 3.18 A	Moment of inertia (J)	: 0.1595 sq.ft.lb
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 7.27 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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LOAD PERFORMANCE CURVE

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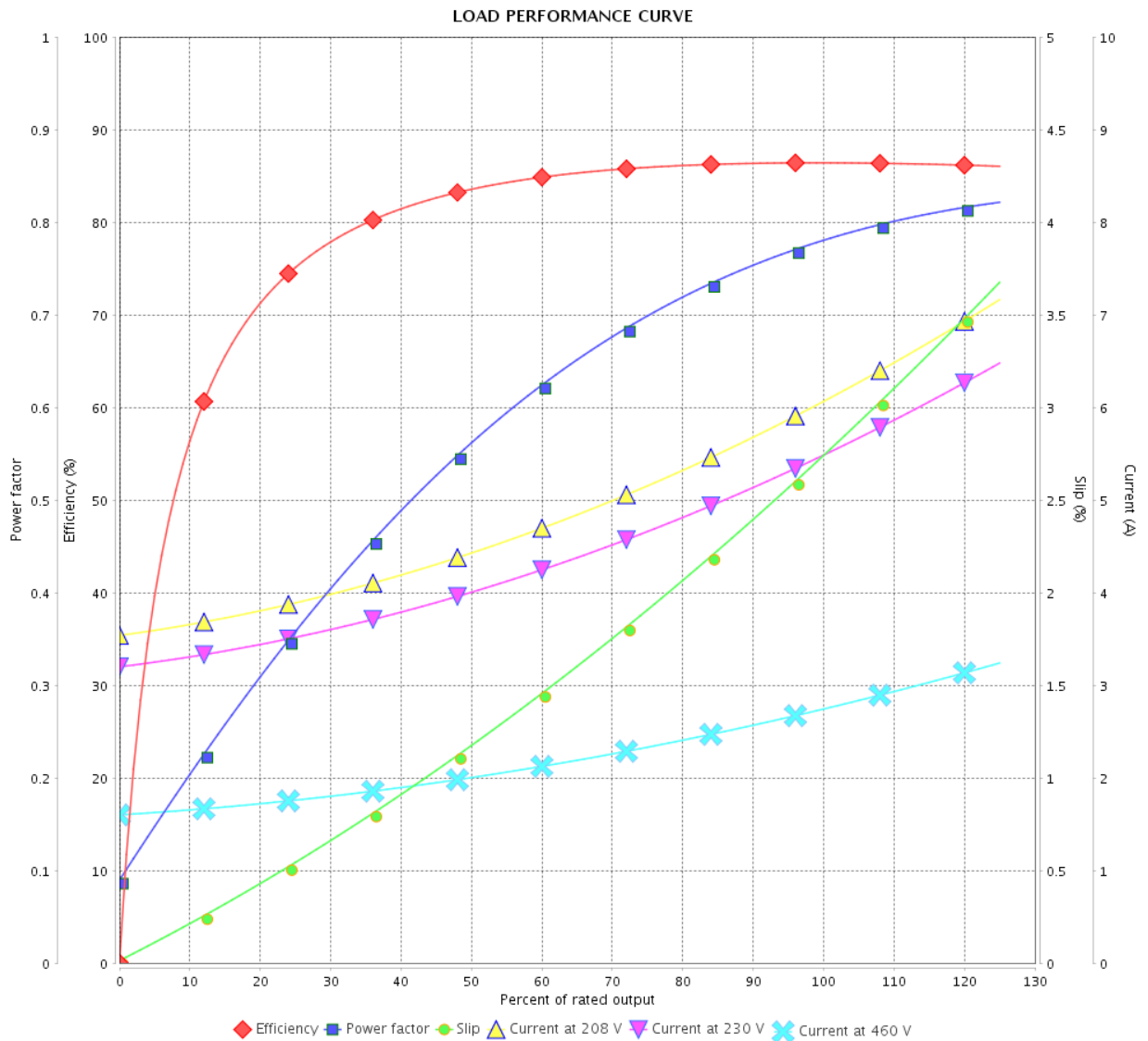


Customer :

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Performance : 230/460 V 60 Hz 4P

Rated current : 5.58/2.79 A
 LRC : 8.9
 Rated torque : 6.00 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 320 %
 Rated speed : 1750 rpm

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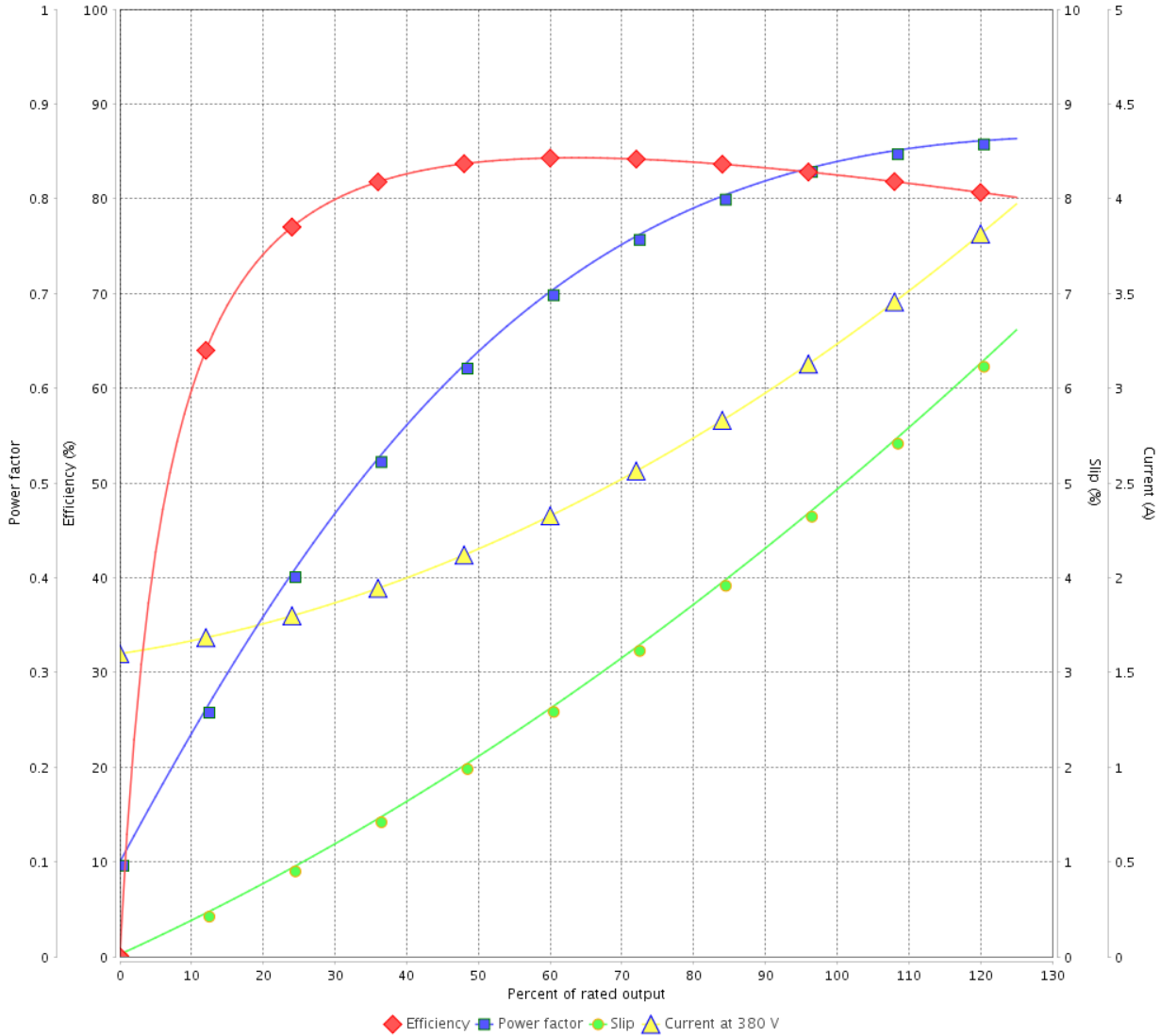
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Performance : 380 V 50 Hz 4P IE1

Rated current : 3.29 A
 LRC : 7.6
 Rated torque : 7.37 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 220 %
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.1595 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

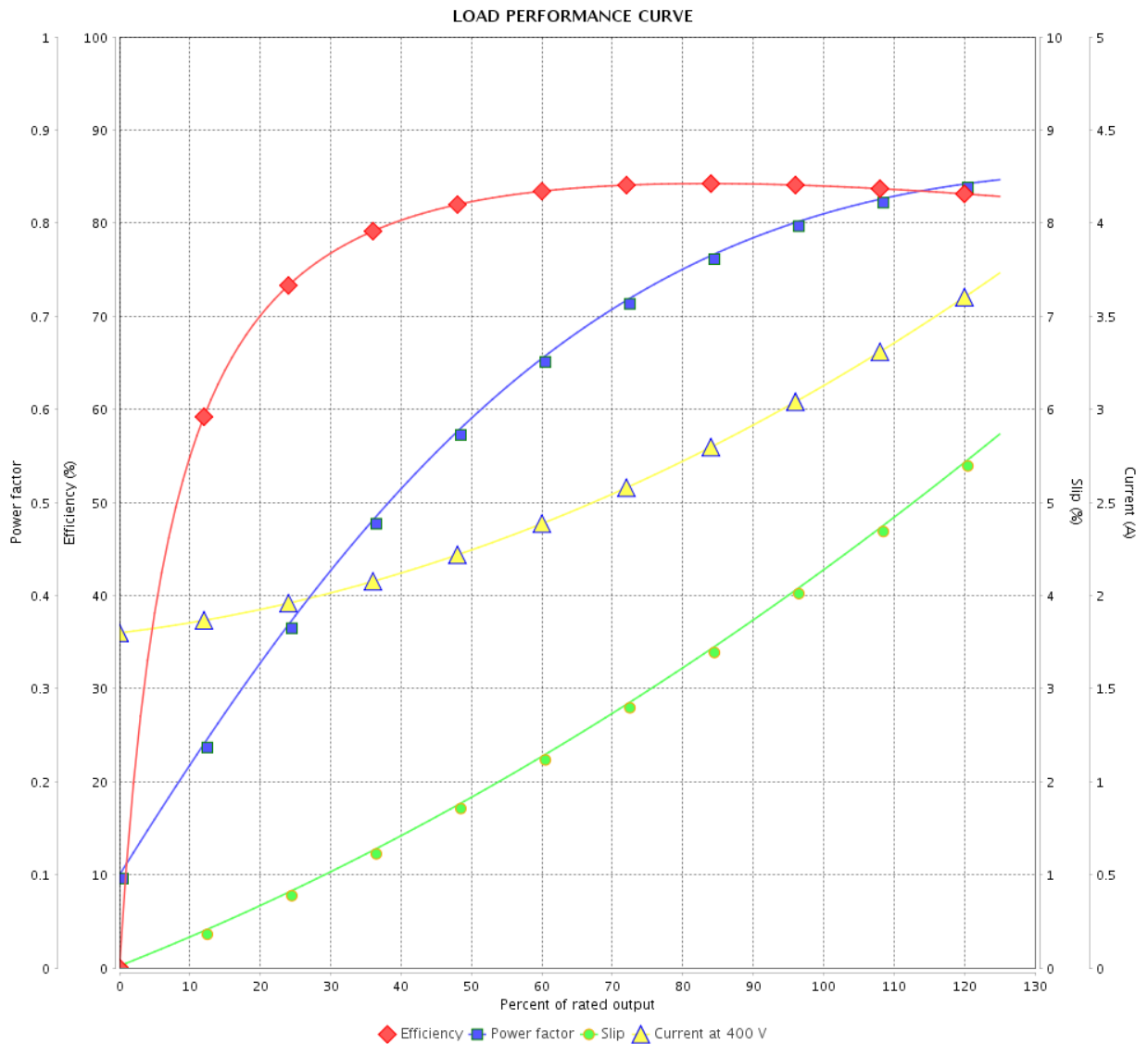


Customer : _____

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Catalog # : 00218XT3ER145TC



Performance : 400 V 50 Hz 4P IE2

Rated current : 3.18 A
 LRC : 7.8
 Rated torque : 7.32 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.1595 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



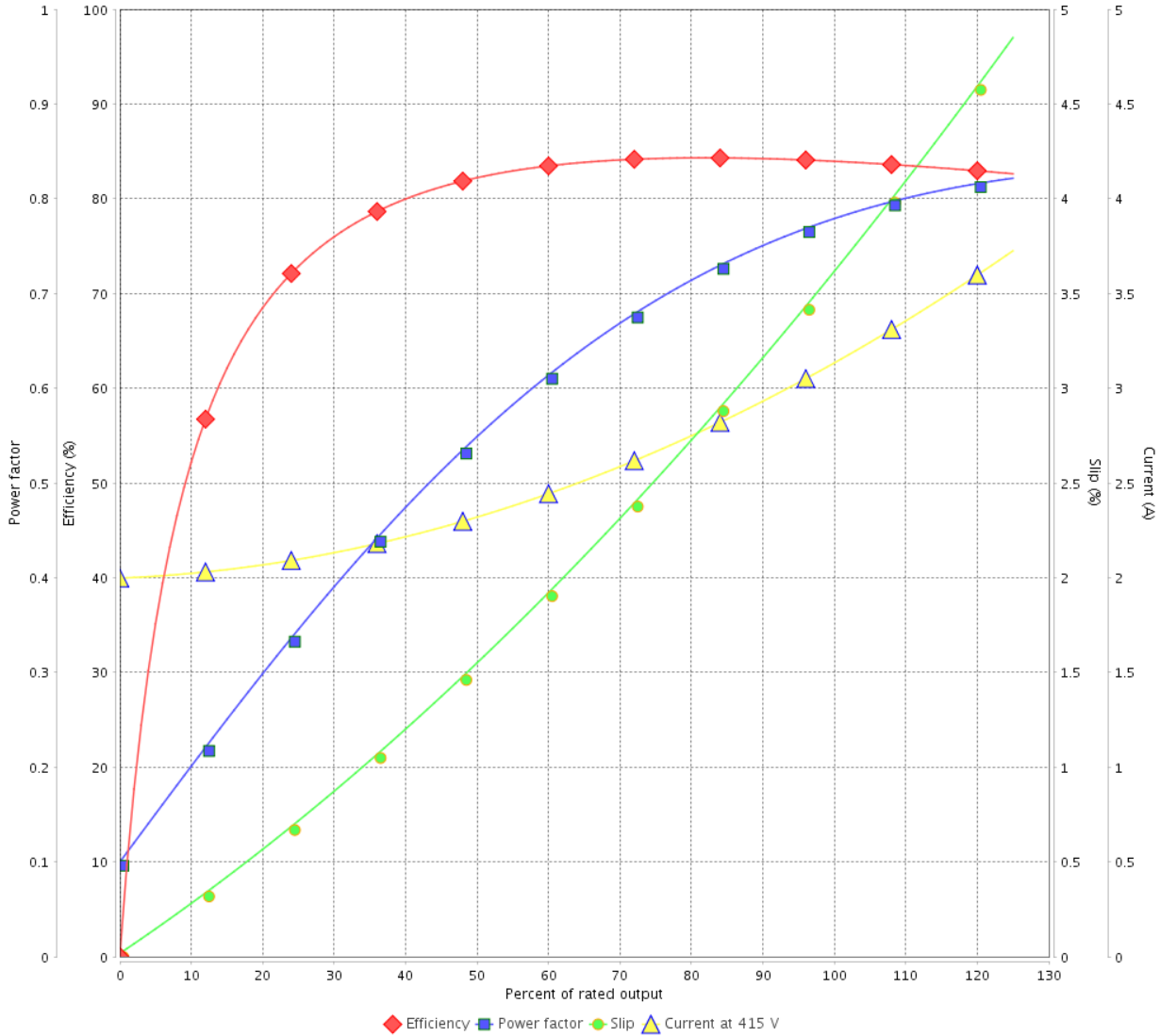
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THERMAL LIMIT CURVE



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Locked rotor torque : 270 %	Service factor : 1.15
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1750 rpm	Design : B

Heating constant

Cooling constant

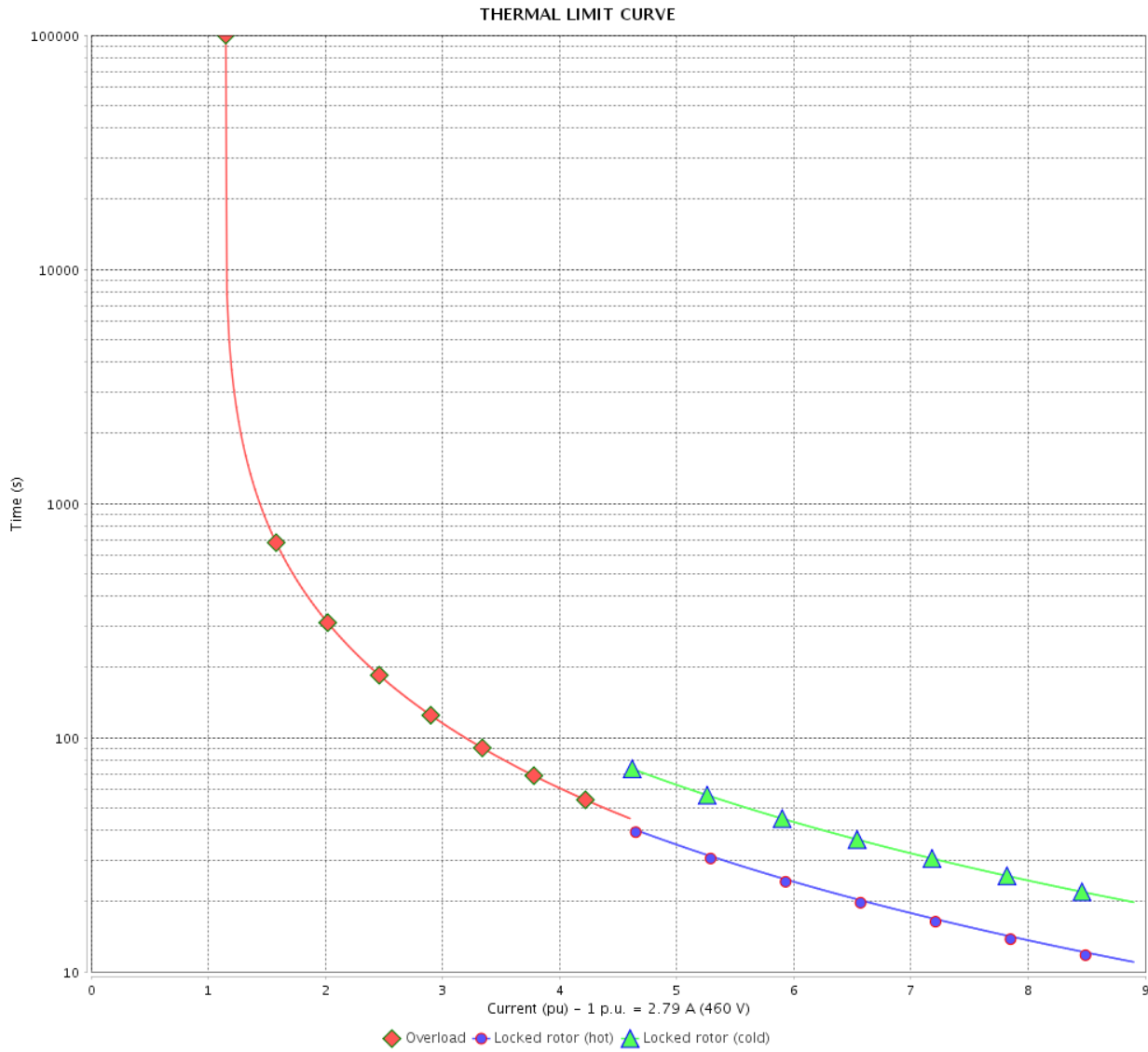
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Service factor : 1.00
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Design : B

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Cooling constant

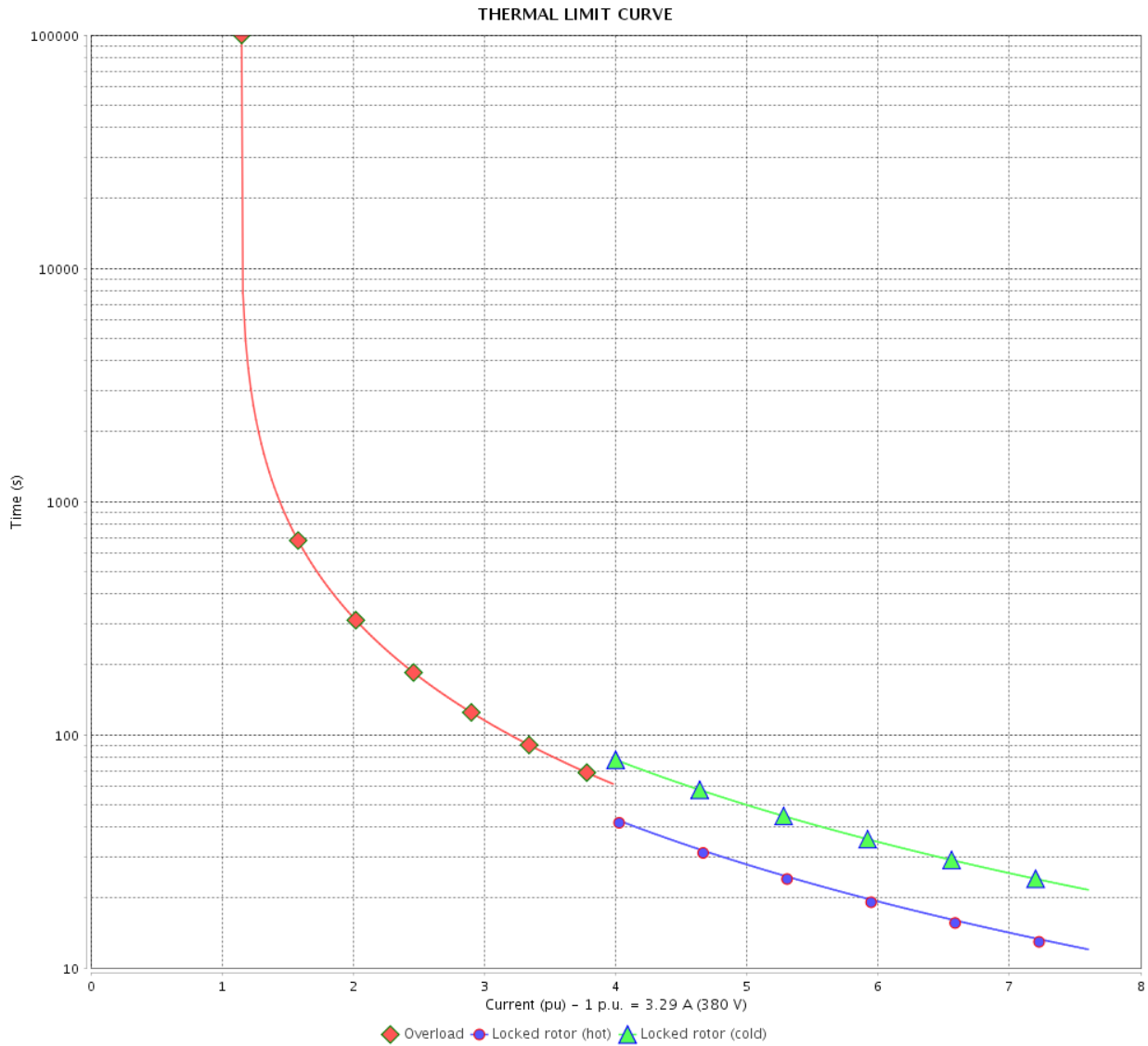
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Performance : 400 V 50 Hz 4P IE2

Rated current : 3.18 A
 LRC : 7.8
 Rated torque : 7.32 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Heating constant
 Cooling constant

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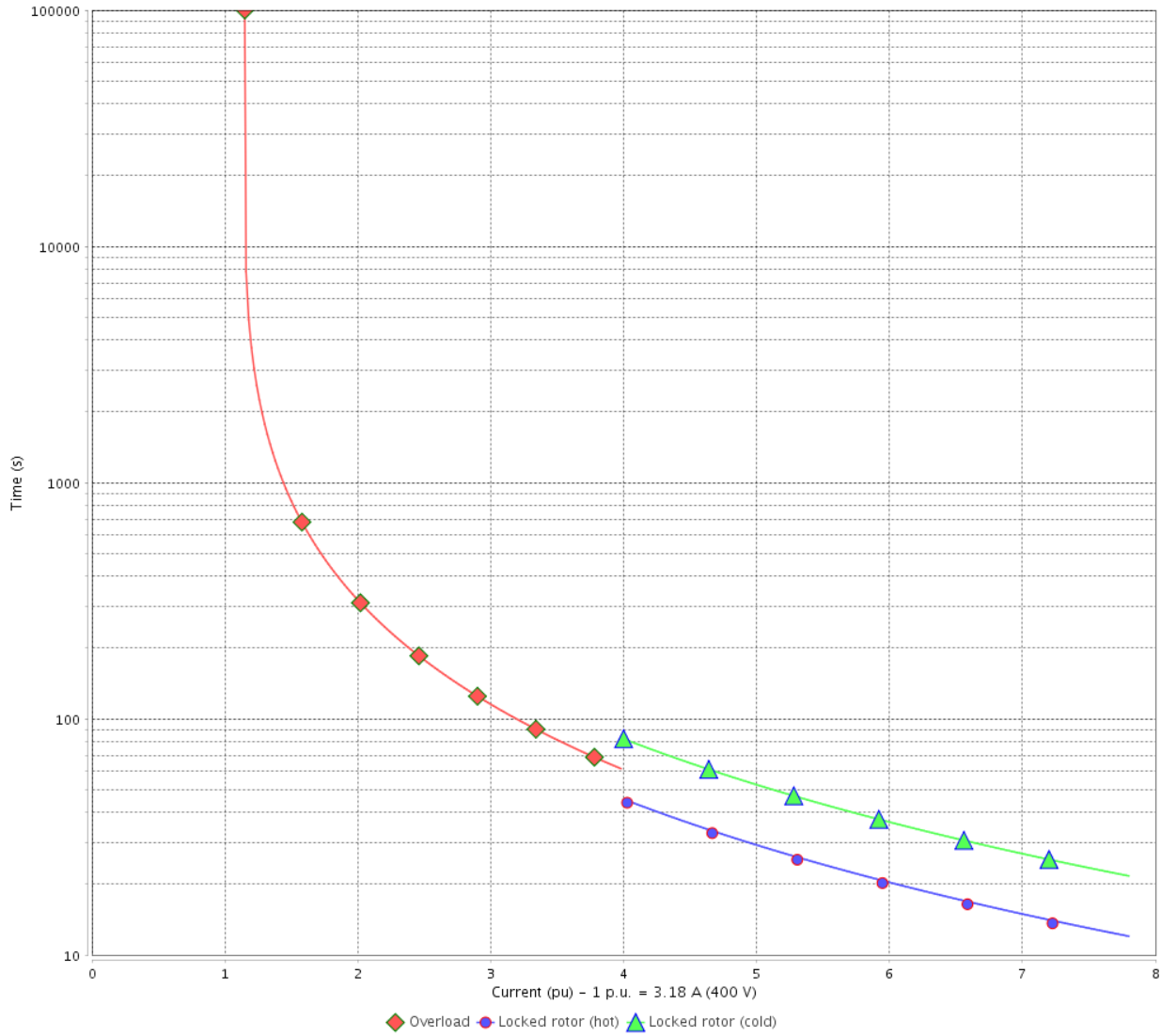
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THERMAL LIMIT CURVE



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Cooling constant

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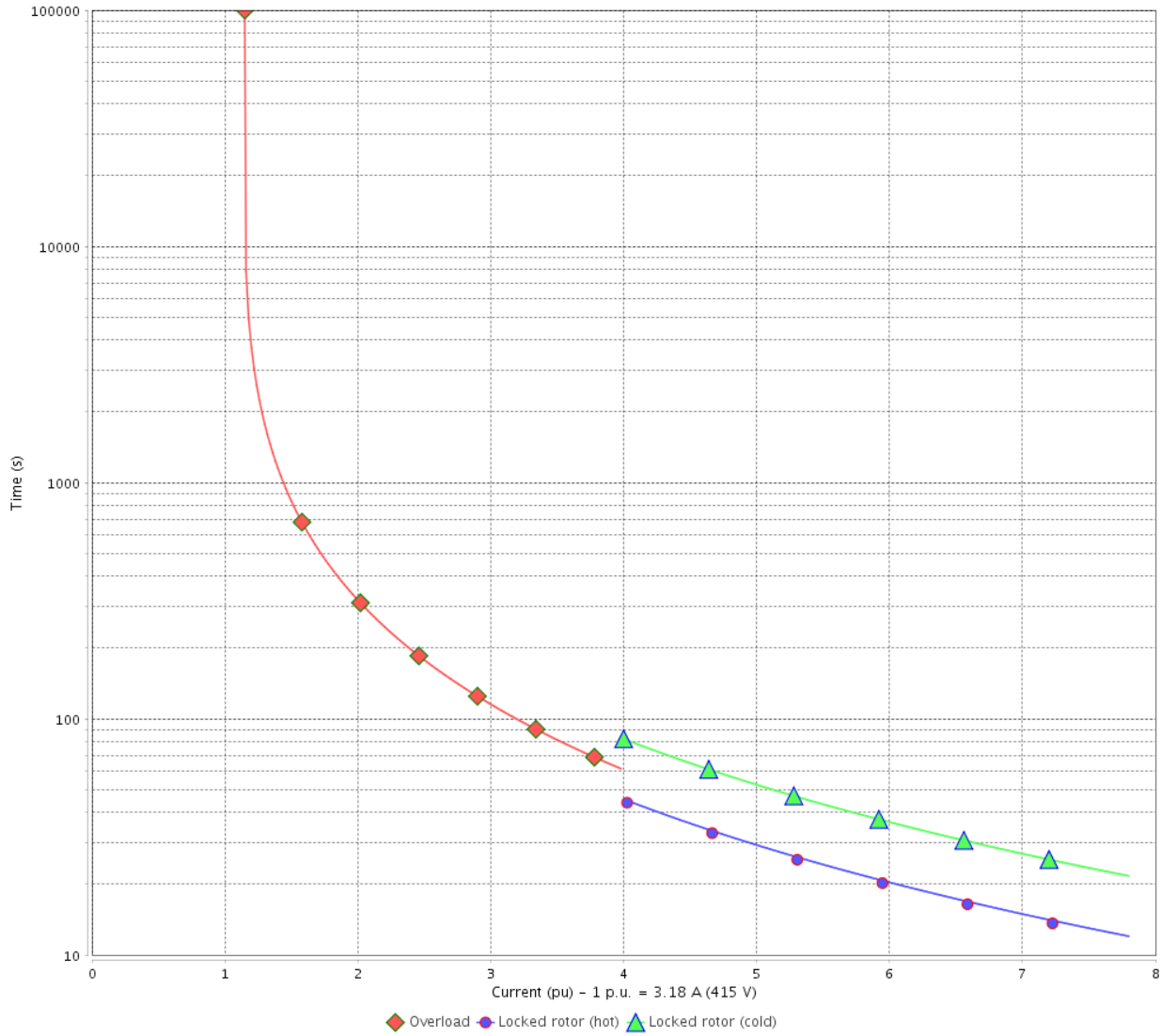
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

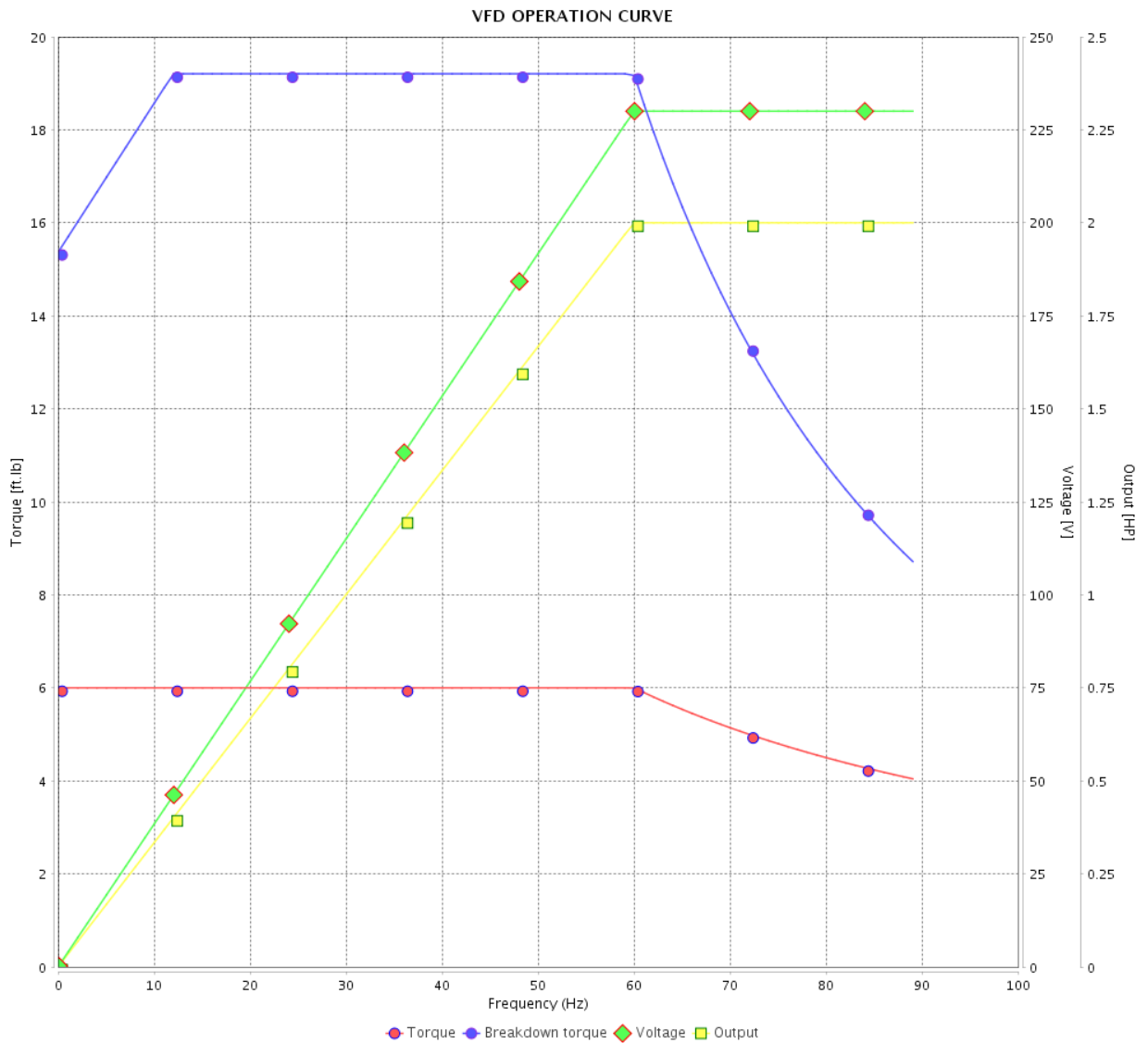


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Performance : 230/460 V 60 Hz 4P

Rated current : 5.58/2.79 A
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 Locked rotor torque : 270 %
 Breakdown torque : 320 %
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 Insulation class : F
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



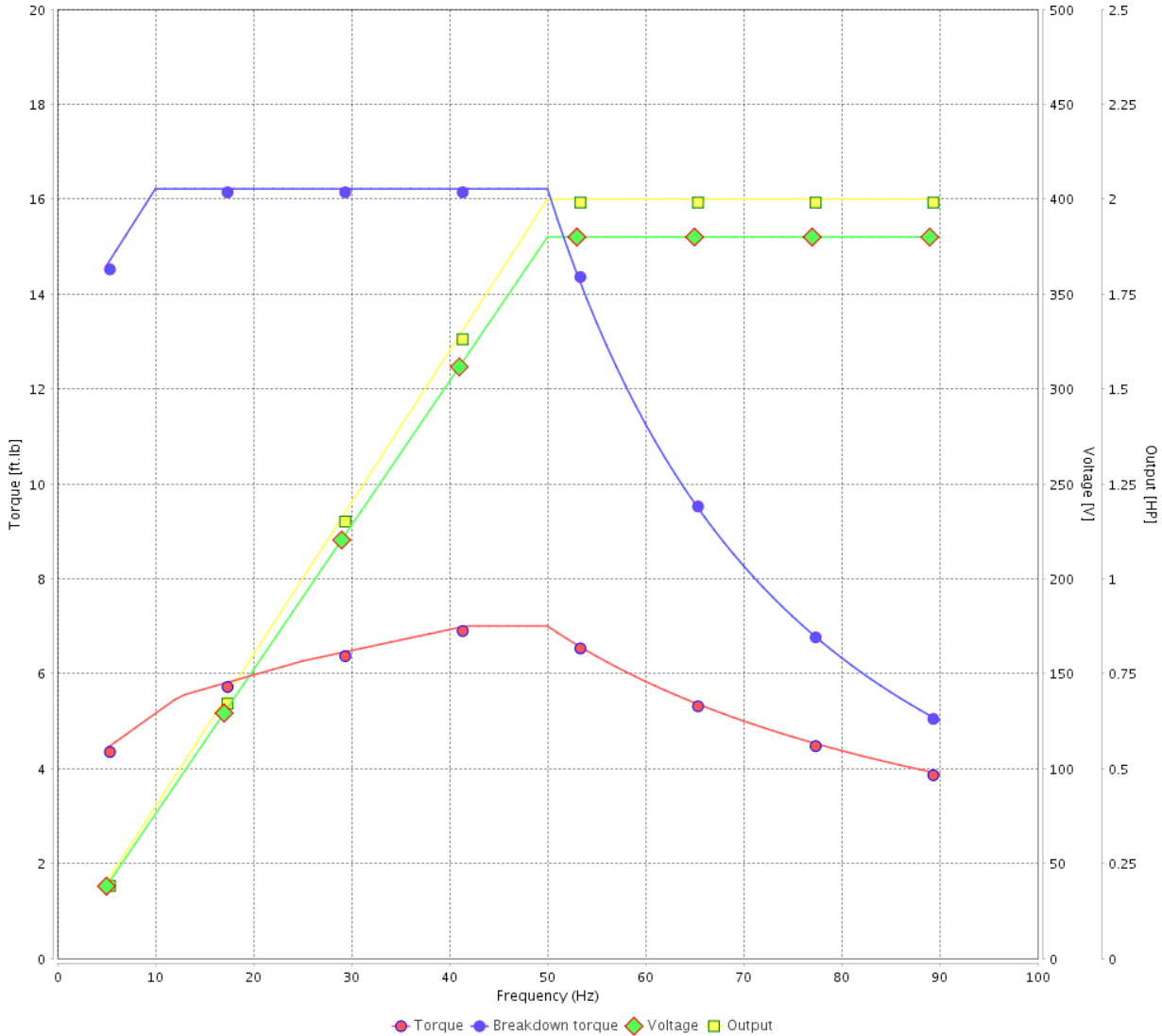
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current : 3.29 A
 LRC : 7.6
 Rated torque : 7.37 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 220 %
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

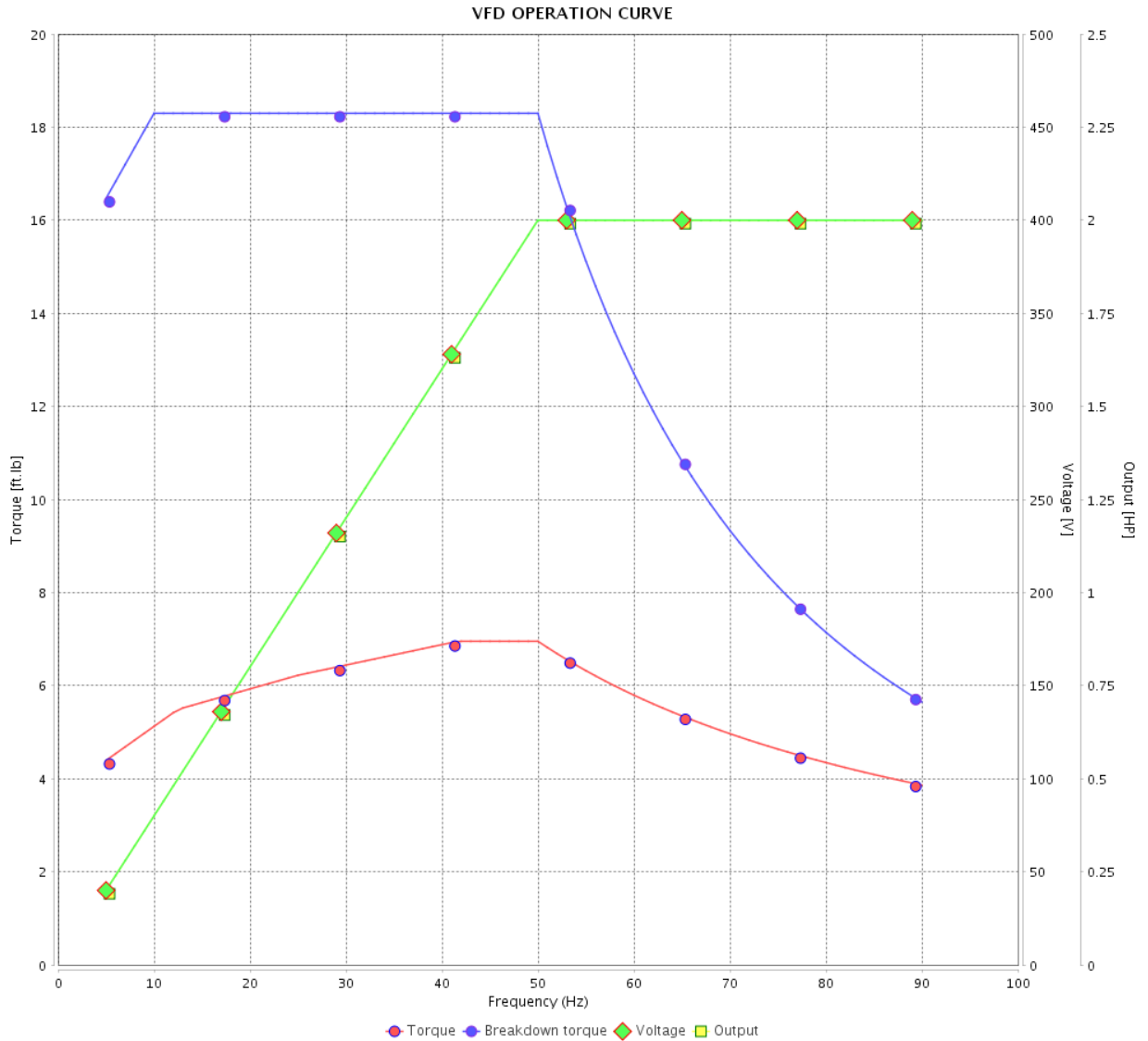


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Performance : 400 V 50 Hz 4P IE2

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

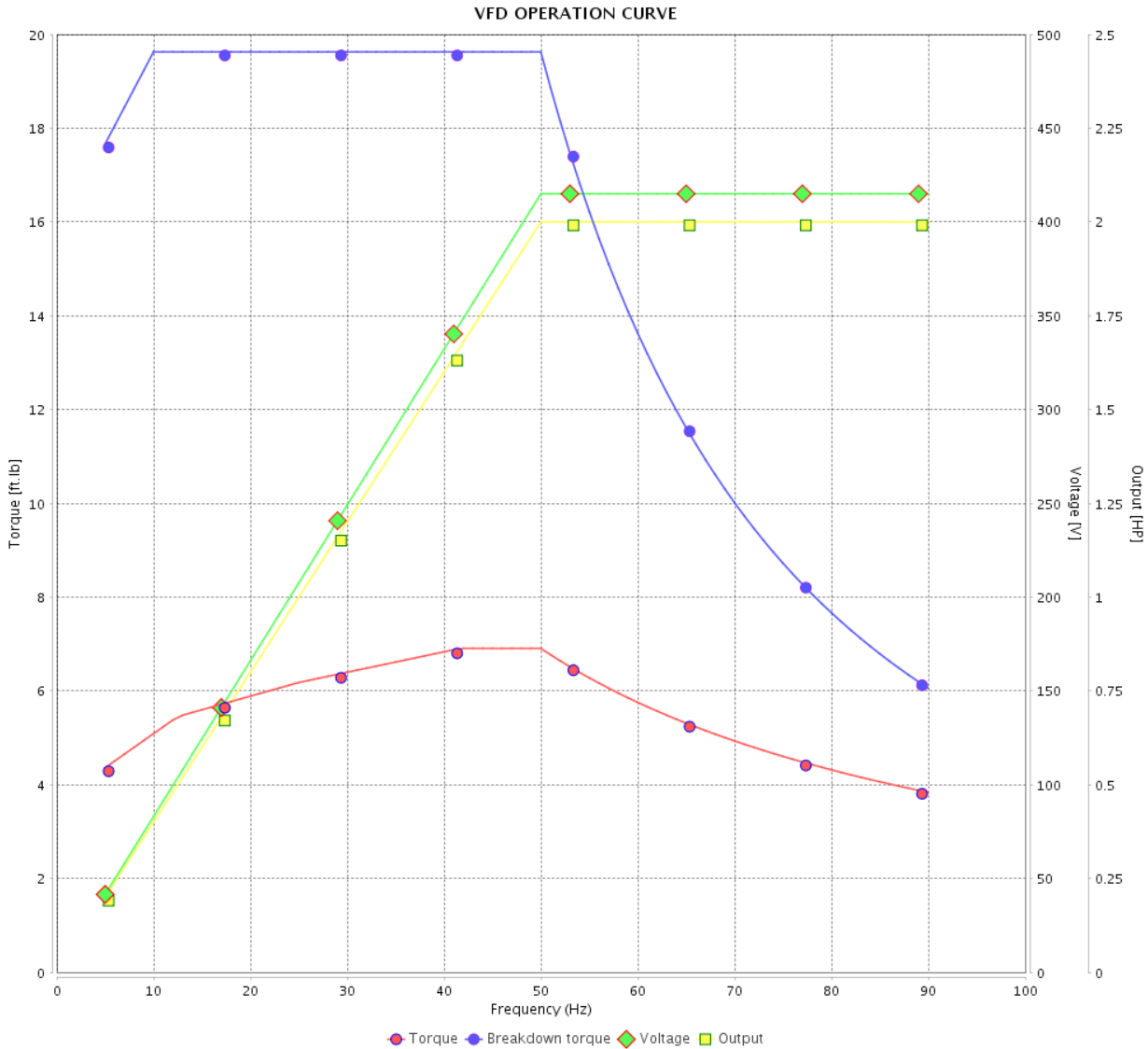


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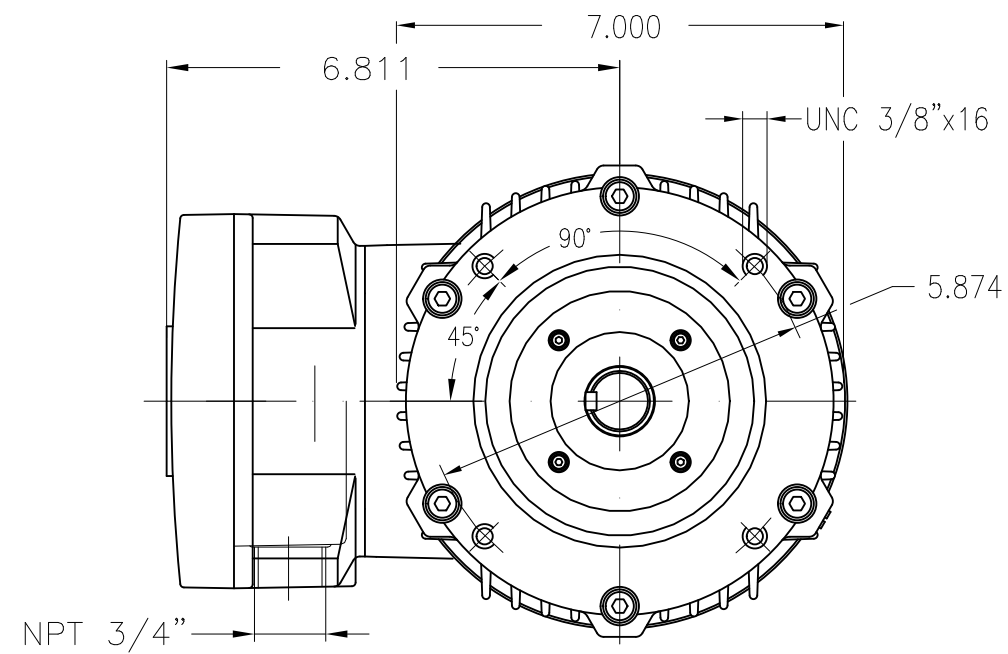


Performance : 415 V 50 Hz 4P IE2

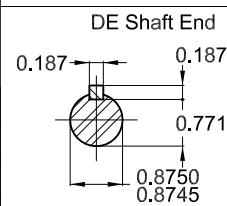
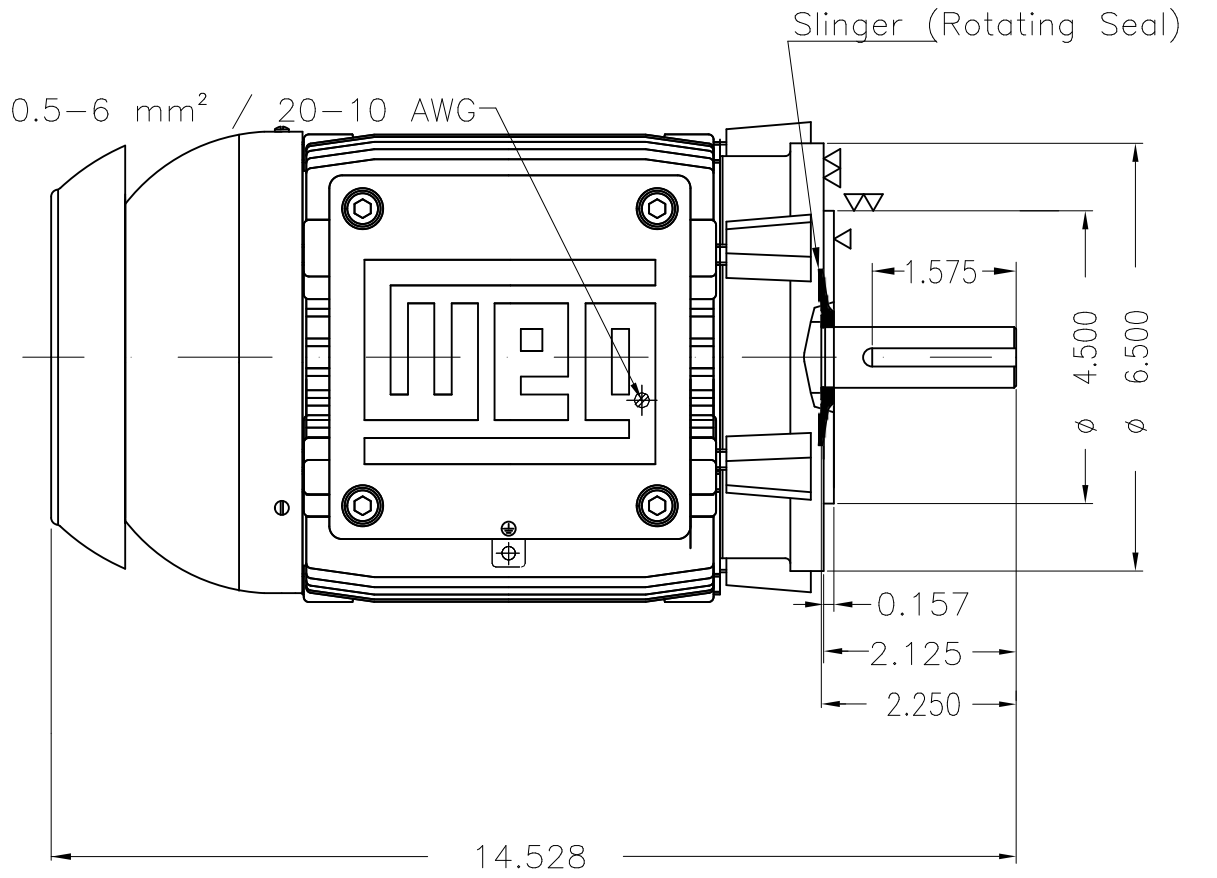
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Grounding for leads 0.5–6 mm² / 20–10 AWG



Color RAL 5009
 Painting plan 202P
 Mounting NEMA W-6
 Mounting V18

2 HP 04 Poles 60 Hz

Dimensions in inches

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 143/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**
Premium

14276311



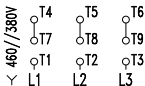
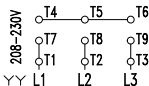
CC029A

Inverter Duty Motor
Severe Duty

MODEL 00218XT3ER145TC

PH 3	FR 143/5TC	
HP(kW) 2.0(1.5)		HZ 60 IP55
V 230/460		A 5.58/2.79
RPM 1750		NEMA NOM EFF 86.5%
PF 0.78	SFA 6.42/3.21	DES B
INS CL F Δ T 80 K	SF 1.15	ENCL TEFC
DUTY CONT.	CODE L	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	6.02 A SF 1.15 SFA 6.92
AMB 55°C	SF1.0	

2.0HP 1.5kW 50Hz 380V 3.29A 1425RPM SF1.00 EFF 82.5% (IE1)



→ 6205-2RS MOBIL POLYREX EM
→ 6204-2RS

75 Lbs



TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 20:1CT, 1.0SF, T3C, AMB 40°C.